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ITEMS OF INTEREST.

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Thots from the Profession.

IS DENTISTRY A PROFESSION OR TRADE?

The following editorial in the *Maryland Medical Journal*, and its reply by Dr. Genese, is worth perusing:

During the past quarter of a century, dentistry has made great progress as an art and as a practical science. Dental schools have been established and the education of the dental student has been so broadened that the graduate in dentistry is in many respects fully qualified to rank among the classes of liberally educated men. The claim that dentistry should be classed as a specialty of medicine has been insisted on by many dentists, and the profession of medicine has not discouraged this idea. In fact, a Section in Dentistry has been created by the American Medical Association in furtherance of this idea. That good will result from this attempt to raise the calling of dentistry to the position it should occupy as a special branch of medicine we doubt not; but before the claim to full recognition as a specialty is conceded and the clear title of profession, as distinguished from a trade, is accorded, certain reforms in methods now practiced by dentists must be insisted on. We have no doubt, many of the best men in dentistry will agree with us in the statement that a profession should not trade on its inventions or discoveries, yet this practice is still employed by dentists to the discredit of the science and to the lowering of its practice. A dentist invents a dental chair, a dental engine, a tooth or instrument, all of which may be of value to his craft. What does he do with it? Give it to his fellow-associates? No. He immediately covers it with letters-patent and sells it as an article of trade. What would have been thought of Marion Sims or Lennox Hodge, or of any physician who may have enriched his profession by his mechanical ingenuity, had he have covered his appliance with a patent and have used it to his pecuniary advantage? By general consent he would be regarded as a tradesman of the meanest order. We have a practical illustration of this in the history of medicine. Many years ago one Chamberlaine discovered the obstetrical forceps and for years held it

as a family secret. The instrument was used as a means of private gain and its employment was practically forbidden so long as the Chamberlaines could use it as an instrument of extortion. What think we of the Chamberlaines? Is the practice of the dentists in any respect an improvement on that of the Chamberlaines, or is it in any respect less open to criticism and disapproval? We think not, and in this opinion we have the support of many dentists. We believe the time will come when all respectable dentists will repudiate the methods to which we refer, and when this becomes the case the claim that dentistry is a profession and not a trade will be generally conceded. The distinction between a profession and a trade is sharply defined. A profession is a trade and something more, a trade is a profession and something less.

Editor Maryland Medical Journal:—Your article comparing Chamberlaine's method of practice with inventive dentists is unjust.

The case stands just the reverse, and I will try to show by facts, that the dental profession has gained in every respect more by members who are inventors and patentees, than the medical department has by its policy of exclusion.

How many new appliances have been given the medical profession, and announced in your Journal in the last five years? Four; while Dental Journals during the same time have recorded more than one hundred important dental inventions.

In protecting an invention and giving the right of manufacture to one firm the instrument is cheapened to the general practitioner more than 50 per cent. Take for example, an elaborate piece of mechanism which to be made by hand by the best instrument makers, costs twenty dollars, add to it a fair per cent of profit, and it is kept exclusively for the use of the few.

Produce the same instrument by machinery (which demands an outlay of a thousand dollars), and you can sell the instrument better furnished at ten dollars, and get a profit for the maker, with a small royalty for the inventor, and bring the purchase within reach of all practitioners, while the maker is able to send a perfect instrument made correct in every detail to all the dealers in the profession.

Dental inventions differ from traders, for simple purchase carries with it the right of using without charge for the term of the patent and are not a monopoly as in the Chamberlaine's case.

Our dental inventions are not shut up like those of our medical confreres in one city or one society, but are shown in practical use at all the clinics of the State societies, either by the inventor in person or a practitioner appointed by the dental firm who holds the right of manu-

facturing, and our clinics are given in the most practical form either on members of the profession or a patient chosen especially to demonstrate the usefulness of the invention.

Apropos of chairs, teeth and engines, named in your article. The chair which places the patient at ease and spares the operator so much fatigue, costing $150, could not be produced in small numbers by local tradesmen at less than double the price for inferior work. Our engines vastly improved have been produced for $45, whereas the inferior production of long ago cost $75.

If you will refer to the dental journals of this country, you will find the reports teaming with information on all branches of dental surgery that any medical college or society might be proud of, and at the monthly and yearly meeting of the Dental Societies practical demonstrations of new methods in treatment, appliances, and everything appertaining to the advancement of our profession is really circulated throughout every State in the Union and reports sent to our confreres across the waters.

The dentist perfects his invention often at great loss and labor, and when found to be an improvement over methods in use, time saving, to both patient and dentist, he gives his invention well made at a nominal price, free of restriction to his fellow practitioners, and is no more a trader than the medical man who writes or compiles a book and has it copyrighted.

D. GENESE.

Baltimore, Md.

IMMEDIATE ROOT FILLING.

DR. H. A. SMITH, CINCINNATI, O.

[Read before the Mississippi Valley Dental Association, held in Cincinnati, O., March 7, 1888.]

If we were called on to fill root canals in teeth from which only healthy pulps had been removed by surgical means, I presume the system of "Immediate Root Filling" would be generally adopted. Cases presenting this favorable condition are, however, comparatively rare, and the dentist finds pulps in all stages of inflammation, decomposing and dead pulps, complicated with disease of the peridental membrane and alveolar abscess, acute or chronic. It is due to this variety that practitioners necessarily differ in their methods of treatment and in what they regard as the proper time for permanently stopping a root. If there were no other reason for these differences in practice, they would naturally result from temperamental differences in dentists themselves.

The typical immediate root filler of our day certainly shows no timidity; indeed, his courage seems oftener to run away with his judgment. He is ambitious not only to annihilate space, but time.

The most favorable cases are those in which the pulp has been

removed by surgical means, leaving at the apex of the root simply an incised wound, which will heal by first intention; and in this condition, if proper aseptic precautions have been observed in the removal of the pulp; we may fill the canal immediately, with little danger of irritation occurring in the apical space. When arsenious acid has been used and the irritant effects of the arsenic have been confined to the pulp, as shown usually by the slight pain attending its removal, we may also, with comparative safety, proceed to fill at once. If, however, in taking away the pulp any considerable hemorrhage follows, that is not arrested spontaneously, it is not best to fill at the same sitting. The application of carbolic acid or the usual styptics to hasten coagulation, will cause some injury to the tissues about the apex, inducing irritation. Then better practice is to leave the clot that has been formed, in contact with the wound till healing has commenced. The blood clot is nature's own dressing and completely filling as it does the root canal, effectually prevents infection from without. By placing an antiseptic cotton dressing in the canal, in contact with the clot, decomposition of the blood will be prevented for several days. In from twenty-four to thirty-six hours, the clot may be removed without disturbing the layer of granular tissue which has formed, and as an antiseptic condition of the root has been maintained, we may, after careful washing, proceed to fill permanently. Ordinarily in chronic cases of alveolar abscess with fistula, where systemic conditions are favorable, the root may be filled permanently after thorough cleansing of the pulp cavity and sinus with peroxide of hydrogen, followed by a mild antiseptic such as a dilute solution of carbolic acid or bichloride of mercury.

It is in the management of those cases in which the pulp, having been gangrenous, and as a source of infection for a long period, has caused abscess, with discharge either through the root canal or alveolus, that a radical difference in practice prevails between the conservative practitioner and the advocate of immediate root filling. The statement that all roots can be made aseptic by treatment at one sitting we cannot accept. We have all seen how readily the dentine and cement of roots of teeth take up coloring matter from the old-fashioned copper amalgam with which they have been filled. If this coloring matter will thus penetrate these dense tissues, certainly septic matter from a pulp that has long been gangrenous will thoroughly infiltrate the tissues of the root, often reaching the peridental membrane. We can then hope to counteract sepsis in these cases only by repeated washings with disinfectants, followed each time with an antiseptic which will not combine with organic matter in such a way as to prevent the effects of subsequent treatment. When we have decided to fill the root, the use of a powerful coagulator, such as chloride of zinc, as a last dressing is

indicated. This "cooks" or "vulcanizes" the albuminous matter and renders it fixt material.

The attempt to obtain an aseptic condition by burring the root canal in which the pulp has been in a putrid condition for sometime, would be idle; as would also the practice of correcting sepsis by introducing into the root canal the point of a heated instrument.

Those who advocate immediate root filling place great reliance on nature's power to cure. This recuperative vitality is, in the mouth, as in all parts of the body, an unknown factor, and cannot be measured accurately. Since the source of contagion in these chronic cases is not confined to the pulp chamber, we would do well to keep the root canals open till we have some better evidence of cure than the cessation of discharge through the external opening, which may follow a single treatment. Granulation tissue may form in the apical space, and along the walls of the sinus, and the fistula may heal; yet a cure is not certainly effected. The balance between health and disease which obtained for a short time, has turned on the side of disease; the new tissue formation gives way and we still have a chronic case of abscess. May we not treat such an abscess through the opening in the gum after having filled the root? We may; but not nearly so effectually as when the opening is maintained through the root.

In blind abscess and other trouble following this hasty method of treatment, the surgical procedure of drilling down on the abscess is freely spoken of as an effective and easy operation. In all surgical treatment two people are to be considered, the operator and the one operated on. The immediate root filler in the zeal of his universal method, seems to have left out of consideration the person on whom he inflicts the wound. Besides the uncertainty of affording relief by drilling through the alveolus in forming abscess, is the disagreeable fact that the operation should be performed at the most painful stage in the inflammation, that is, just before the formation of pus.

The papers and discussions which have appeared on this subject in the past two years, have at least, had a wholesome effect on our daily practice. It has resulted in the adoption of better methods of antisepsis and a stricter cleanliness of both the operator's instruments and person; the action of certain medicaments has become better known, and the relative potency of a great number of antiseptics carefully studied. More exact methods of root filling are being practiced, and we shall, no doubt, in the future have more uniformly good results in our efforts to save pulpless teeth. Let each practitioner study carefully the processes of those who are notably successful, and apply the knowledge thus obtained with prudence and patience and skill. Be contented with nothing but your best endeavors.—*Ohio State Journal.*

DECIDUOUS TEETH AND THE EVILS OF THEIR DECAY AND LOSS.

DR. GARRETT NEWKIRK, CHICAGO.

(Read before the Dental Section of the American Medical Association.)

As the potter forms his beautiful designs in plastic clay, so nature forms all the organs of the body. At first they are soft, little more in appearance or consistency than so many bits of jelly. By slow degrees they are brought to the requisite density of foundation, framework and superstructure.

The harder the tissue, the longer the time of its development and the slower its changes. The permanent teeth are the hardest structures in the body. Because the permanent teeth are to be the hardest tissues of the body, they must have time for growth and maturity.

Formed first in the soft state their density depends on the slow deposit of lime salts, particle by particle. The process will require for its final completion, nearly half a lifetime. A structure for a thousand years cannot be built in two years. The teeth of prehistoric men still remain in mounds where even bones have crumbled. To supply the wants of the child while these are building, nature has provided a deciduous set.

The law of existence as to the temporary tooth is this. Each has a legitimate successor elected to take his seat at a certain time. The first should remain till the time of the second. The deciduous central incisors should remain till the seventh year, the laterals till the eighth, the molars till the ninth or tenth, the cuspids, last of all, till the tenth or eleventh year. From the age of seven to eleven or twelve nature intends the child to have a mixt set of teeth. Whether it be true or not that she "abhors a vacuum," she certainly despises a gap in a row of teeth. One office of the teeth, especially in early life, is to support one another. A row of teeth is something like a row of books—remove one, the others tend to fall together. Now mark this point: If a temporary tooth be prematurely lost while its successor is imperfectly calcified and unready, one of several undesirable things may happen: First, the tooth may fail to come down, then the space is lost by the falling together of the adjacent teeth, eruption may be thus retarded, or as sometimes happens, entirely prevented; or, the teeth may erupt inside or outside the line of the arch, causing an irregularity; or, it may erupt too soon, imperfectly calcified, and so be readily attacked by decay.

Most of the cases of protruding cuspids so frequently seen are caused by the premature loss of the temporary. An exception is where the temporary cuspid is retained *too* long, producing the same result. The rule is that the temporary cuspid should remain in the mouth till the child is eleven years old, sometimes longer. It is safe to say that,

till the temporary teeth are well in place, the indications of nature are plainly against the free use of solid food. When the teeth are in place, nature is ready for the introduction of a more substantial diet than milk.

The uses of the temporary teeth are the same as of those that follow. They were created because they were needed. The food of the child needs the facility for mastication. The premature loss of a tooth is a loss to mastication and digestion. The same material want which called for the *existence* of the tooth calls also for its use and *preservation.*

The troubles which proceed from diseased teeth in the adult follow from the same cause in children. Whatever causes nervous irritability in children we all know should be avoided. Very few people realize how much they suffer from neglected teeth. The eruption of the teeth is far less apt to produce reflex disturbance than their decay after eruption. Nothing is better calculated than a congested pulp to cause pain, insomnia, general nervousness and irritability. Such disturbances continuing, indigestion, malnutrition and intestinal troubles follow. Convulsive tendencies are also increased. Within two years I have seen a case of chorea in a child ten years old, associated with diseased teeth. The filling of these, with protection to several nearly exposed pulps, was followed by speedy recovery. Since the attention of ophthalmologists and otologists has been given more to the cause and treatment of reflex nervous influence, it has been found that diseased teeth in children as well as in adults, are often the real source of troubles referred to the eye and ear.

Parents usually neglect their duty to their children's teeth. They do it not willfully, but through ignorance. The physician is supposed to know about them, but is apt to forget the teeth of his little patients. The dentist is not consulted till the mischief is done, and too often he lacks the definite knowledge, patience and skill to do the children justice. Decay is permitted to go on, associated with more or less irritation and reflex disturbance, till the pulp of the tooth dies. Then the the putrefaction of the dead pulp tissue begins with the evolution of poisonous gases. If these do not find escape through the cavity of decay, they pass through the end of the root into the investing tissues, causing inflammation and abscess. What people call a "gumboil" is an opening for the discharge of pus from an abscess connected with the root of a neglected tooth with a putrefying pulp. The pus is discharged almost daily and mingles in the fluids of the mouth. It is mixt with the saliva and food and swallowed. It may or may not be poisonous; it certainly is not wholesome. The teeth thus affected are tender on pressure; that is, the tissues under the root are sensitive and painful when the tooth is touched. The swelling of their underlying membrane makes

them sometimes protrude a little when the child attempts to bring his teeth together in mastication. The sore ones touch first; therefore, he avoids chewing, and swallows his food as best he can. He is likely to contract the habit of bolting his food, and this habit may cling to him long after the exciting cause has been removed.

SOME DIFFICULT CASES AND THEIR TREATMENT.

L. P. HASKELL, CHICAGO.

[Read before the Illinois State Dental Society.]

Were the conditions of all mouths similar and equally favorable, the insertion of artificial dentures would be a mere pastime to the experienced dentist. But unfortunately for both patient and dentist this is not the case, as we all have good reason to know. It is often difficult to make the patient comprehend this, as she remarks that "my mother (or some other intimate friend) has a set of teeth she can scarcely pull out of her mouth, and she can even crack nuts with them, and why cannot I?"

Often, the work is undertaken without first considering all the unfavorable conditions of the mouth; for while some months are so favorable that a set of teeth made by a novice will work well, others are so unfavorable that the utmost care and experience are necessary to construct them; the patient will have to exercise patience, and require a much longer time to learn to use them.

As long as I have been engaged in a practice exclusively prosthetic, new combinations still present themselves; and some of them are very difficult to decide as to what is best to be done to secure satisfactory results.

After a careful diagnosis of such cases, I explain to the patient the conditions of the case, and endeavor to make clear its difficulties and what may reasonably be expected from the work when completed. Often, not the least difficult factor is expense. Either the patient cannot or will not submit to the expense necessary to secure the best results, especially when a metal plate is a *sine qua non*. This is sometimes true of persons who, in all other things, procure the *best* regardless of expense. As for instance, a lady who was absolutely suffering from the non-conductibility of rubber plates, so much so that she was often compelled to remove them to relieve her mouth from the heat, remarked "I am not going to pay so much as that for a set of teeth;" and yet, on her person were thousands of dollars worth of diamonds. She, however, came back two months later and had the teeth made, and said to me afterward, "no money could buy them if I could not get another set like them."

Sometimes patients, after being told what must be done to secure

the best results, will allow you to complete a part of the work and then refuse to have the rest done, because perhaps some tooth or roots must be removed, and then complain that the work is not satisfactory, as the following case will illustrate: A lady consulted me as to what should be done with her mouth, apparently willing to abide by my judgment. There were a few loose teeth and roots in the upper jaw, and six anterior teeth and a few roots in the lower. I advised the extraction of all the upper and the roots in the lower, and the insertion of an upper and partial lower. She consented, and I extracted the upper; but her courage failed, and she would not allow me to remove the lower roots. I made her a temporary upper, and impressed upon her the necessity sooner or later for a partial lower. She wore the temporary a year, and returned for her permanent. She still objected to the extraction of the lower roots. I made the permanent upper and told her she would have trouble with them unless she had lower posterior teeth to sustain the plate when the mouth closed, for the plate would be constantly displaced. The upper maxillary was very thin, and the lower teeth somewhat prominent, so that they would close outside the arch. Had it been a receding lower jaw, the teeth closing well inside, the upper teeth would have been in a measure supported. The upper set was all right in every respect, but the closure would displace it. The result has been dissatisfaction, and complaint to all her neighbors; though I sent her word that if she would let me do as I wished, and then the upper troubled her after a fair trial, I would make no charge for the work, so confident was I of success. But the conditions are even worse now than when the teeth were made, for the constant pressure on the front has caused complete absorption of all the process, and she now bites against a yielding ridge.

Another class of cases is where the upper teeth are all gone, and on the lower jaw the six anterior teeth and one or two bicuspids on one side remain. There being no teeth on the opposite side of the jaw to counterbalance the pressure of these one or two bicuspids, the plate is constantly displaced; for this there is no remedy, but the extraction of these bicuspids, because artificial teeth on the opposite side would soon yield to pressure and the pressure revert to one side. Extract and insert the partial lower, and thus keep the pressure equalized. The extraction of one or two sound teeth subserves the best interests of the patient. This must be regarded rather than mere sentiment.

There are patients where in the upper jaw all the anterior and on one side all the posterior teeth are missing. In such cases the patient would be far better off if they all were out, still I hesitate to advise it, but do the next best thing, viz., make a suction plate, and put a clasp on one of the bicuspids to counteract the pressure on the

other side in masticating; at the same time let the pressure be on the natural teeth.

Then we find patients in whose mouths all the lower teeth, and one-half or two-thirds of the upper are missing,—from the central incisors back. Such a case I had a year ago. This is a worse condition than the one last mentioned, for the lower artificial meet on one side natural teeth and unyielding pressure, and on the other side artificial, and yielding pressure. Here is a case, again, where the only effectual remedy is the extraction of the remaining upper teeth; a partial remedy is secured by shortening the lower teeth, every few months, on the side of the upper natural, to relieve the excessive pressure.

Frequently where the palatal bone is prominent, forming an arch, and extending far back, if "vacuum cavities" are ever deemed necessary they should always be avoided in these cases, as they interfere with the success of a plate. Simply raise the plate entirely clear of it, but allow it to extend beyond at that point, far enough to find a resting place.

When the upper jaw is very prominent and the lip short, and the patient shows teeth and gums, often quite high, the artificial gum must be very thin, high and without seams. There is here but one method of supplying a denture that will fulfil all the requirements; that is by the use of continuous-gum work. With this the teeth can be set under the margin of the gums; the porcelain gum can be made thin as desired and yet strong, as it is baked to the plate, and you have a perfect denture. Some may say, use a gold or rubber plate and set the teeth (plain) against the margin of the gums. But you will have a weak denture, and one that is not as firm as if the plate were carried over the outside of the process. Besides, there is no mouth where the cuspid teeth have been extracted a year or more, that there is not an absolute necessity for making the gum fuller and higher at those points than elsewhere, and this can in such cases be done only with this style of work.

When the upper teeth and lower anterior teeth remain and the patient requires masticating surface, the insertion of a partial lower set is necessary. In doing this, the attempt is often made to relieve the pressure and wear of the anterior teeth by making the artificial teeth sufficiently long. This is always a mistake; the pressure of natural teeth on the posterior artificial teeth results in constant discomfort till the gums have yielded to the pressure, so as to let the teeth down sufficiently to allow the anterior teeth to meet again. Better let them meet at this point at first, and if the anterior teeth have become shortened by wear, "shoe" them.

In many interspersed partial cases the pressure is allowed to bear

on the artificial teeth when it should, if possible, be left on the natural teeth, thereby preventing excessive pressure on narrow surfaces of gum.

I wish to emphasize the vast importance of the word *articulation* as applied to the closure of artificial teeth. More depends on it than anything connected with the success of artificial dentures. Many a denture, right in every other particular, is entirely wrong in this, and consequently a source of discomfort to its wearer.

Three rules cover essentially the ground. Never allow pressure on the six anterior teeth; never, in full upper plates, allow the pressure to be greater on one side than the other; never allow a second or third lower molar, which has projected forward so that its face shows, to meet an artificial tooth at that angle, as it will surely crowd forward the upper plate, the same as the meeting of the anterior teeth.

As a rule, a full lower plate is more comfortable and useful than a partial, because the pressure is distributed equally over the whole jaw.

THE DIAGNOSIS OF DENTAL CARIES AND EXPOSED PULP.

DR. A. MORSMAN, OMAHA, NEB.

Two things are required in diagnosing: first, we must arrive at a correct conclusion; second, we must use such means as will be least unpleasant to the patient. Patients almost always come to us with apprehension, and we can impress them in no way so much as by our expertness in locating their trouble.

"Doctor," said a lady of varied dental experience, "you are the first dentist who ever asked me a question without putting an instrument in my mouth." It is too true, I fear, that many dentists depend almost exclusively on physical signs, to the discomfort of their patient and their own loss, for very much can be learned from symptoms. A decayed tooth presents, and almost the first thing is an excavator, with which the cavity is entered—carefully, perhaps, but causing fear and discomfort, and perhaps unexpected pain.

Visiting a professional friend one day, a lady called with an aching tooth; he placed her in the chair and introduced an excavator into the cavity—there was a jerk of the head and a cry of pain. The Doctor laid aside the instrument and said quietly, as he rolled up a pellet of cotton, "You have an exposed nerve; I will quiet it in a moment." "I could have told you that!" said the lady, and I did not wonder at her indignation.

Diagnosis is by two methods, objective, and subjective, or by physical signs and by symptoms. By symptoms is meant those subjective conditions incident to the disease which become perceptible to the patient's consciousness—as pain, heat, chill, lassitude; by physical signs is meant those changes produced by the lesion, preceptible to

the operator's senses—as swelling, redness, hardness, the appearance of pus, or bleeding. Not only does this include what the operator can see, feel or hear, but also what he may elicit by a refinement of these senses—as for instance, determining the presence of pus by palpation, the difference between a fatty tumor and a hydrocele, or examination by aspiration or other instrumental means.

The diagnosis of dental lesions is much less intricate than medical diagnosis, and its study is not difficult. With a view of aiding the beginner, I will attempt to present the subject in a simple manner. A few general rules may not be amiss.

Do not hurry. Put your patient at ease, if possible, and avoid touching the tooth or using instruments till you have elicited what information you can by other means.

Is there any pain? Has there ever been any? What is its character? What induces it? What aggravates it? Does the tooth ache? Has it ever ached? Has it ever ached at night? Is the ache or pain continuous, or does it occur at regular intervals? Is there any pain in masticating? Is the tooth tender or sore? If food gets into the cavity, does the tooth ache? Do hot or cold drinks produce pain? Has there been any "gum boil" or previous dental operations? How long since the tooth gave trouble? What effect have sweets or acids?

These are a few of the items to be elicited by interrogation. I do not mean that these questions are all to be fired at the patient like a catechism, but they are to be asked as we proceed and as one question seems to lead to another. We must always ask a question with our minds as well as our lips. By that I mean that the patient's answer is to be scrutinized. Answers are sometimes made at random, sometimes forgetfully, and sometimes untruthfully. Let the patient understand that you are asking for information, and not for fun, nor sympathy, nor politeness.

Never be satisfied with indefinate answers. The following amusing scene occurred in my office: The patient, an ignorant Irishman, asked me to look at a tooth. "Has the tooth ever ached?" "Oh, it just hurted me a little, wunct or twict." "Did it ever ache?" "It pained me a bit, but sure I could stand it?" "Pat, do you know what toothache is?" "Indade an' I do, sor." "Has your tooth ever ached?" "Well, thin, it did." "Did it ache hard?" "It kept me awake the night, bad luck to it!" "Does it ache now?" "An' if it didn't would I be here?"

Physical signs, when there is the capability to read them aright, are precise and certain indications, but they are not always present, and it is often much more easy and certain to diagnose by symptoms.

Dental caries is not always accompanied by pain. Many cases are

painless, even to the end. In these we must depend on objective symptoms. Remembering the localities where caries is likely to occur will greatly aid us. A mouth-mirror and a fine pointed probe are essential to an examination. Beginning at the upper third molar, pass successively over each tooth in that jaw, and return in the same manner on the lower jaw. Regard all fissures with suspicion, and press the point of the probe into them their entire extent. If they are perfect, the feel of the enamel is easily recognized. Proximal surfaces should be closely scrutinized. A bit of floss silk drawn between the teeth will sometimes indicate, by catching, that the teeth should be separated and further examination made. White, opaque spots are almost pathognomonic. After a little practice the eye will never be deceived by them, and the chisel will immediately verify the decision. Pits, defects, and colored spots should be examined carefully. No examination should be hurried. Such only result in disappointment to the patient and loss of patronage to the dentist.

Case I.—A white, opaque spot of softened texture, sometimes colored brownish, or even black. It may be round, oblong, serpiginous, or, if at the gingival margin, crescentic. No history of pain of any kind, except it be located on the neck of the tooth, when there may be pain on touching, either with an instrument or the finger nail, even before it is perceptible to the eye. *Possibly*, but very rarely, there has been pain on eating sweets. The diagnosis is *superfical caries*.

Case II.—A cavity of variable size, depending on the tooth, the location, and the age of the patient, but penetrating beyond the enamel. Quite apt to be sensitive to sweets and to cold air, and drinks. Cold causes sharp, fugitive pains, and occasionally transient aching. These symptoms are more marked in proportion as the tooth is of good organization. No pain on suction or pressure on the floor of the cavity. Points where the pulp is likely to be uncovered give no response to the prope, no pain on tapping, and the sound is clear and ringing. The diagnosis is *simple caries*.

Case III.—The cavity is quite deep and filled with debris. If the decalcified dentine has remained in place so that this overlies the pulp, there may have been no pain; otherwise, the tooth is extremely sensitive to cold, a stream from the water syringe giving decided pain. There may have been a slight toothache, or even a severe one, but of short duration. Pain on suction and when food is wedged into the cavity is quite a marked symptom. The examining probe finds some spot sensitive to pressure, or possibly touches the exposed pulp; no tenderness on tapping the tooth. The diagnosis is *complicated caries*.

Case IV.—Severe toothache, either by day or at night, nocturnal pain being almost pathognomonic. Pain throbbing, pulsating, or beat-

ing in character; it may be diffuse, extending over the entire half of the face, or, more rarely, located in the tooth; designated by the patient as "jumping toothache." There is some soreness of the tooth, and there is likely to be considerable tenderness on tapping it with an instrument, though this symptom does not *always* exist. The probe readily detects the exposed pulp, now exquisitely sensitive. Hot water injections or hot drinks increase the pain, while cold water held in the mouth may give temporary relief. Reclining or taking any position that tends to cause a flow of blood to the head increases the paroxysm, hence the tooth is almost certain to ache at night. Bleeding of the pulp is sometimes a marked symptom, especially on removing a pledget of cotton from the cavity; it occurs only in aggravated cases. The countenance is anxious and the appearance of the patient dejected, especially so if the pain has been of long duration. The diagnosis is *pulpitis*.

The stages of this disease are very difficult to distinguish, and can only be supposed by the severity of the symptoms. Almost every severe and continued toothache, the pulp being alive, indicates that the stage of irritation is past, and if the pain is violently throbbing, or if occuring at night, we know that congestion is reached.

Case IV. (*b*)—All the symptoms of acute pulpitis in an aggravated form, with a history of several days' standing. Very difficult to control by applications. If the cavity is well located, pus may be seen on the surface of the pulp; pulp bleeds at slightest touch. The diagnosis is *suppuration of pulp*.

Case V.—Severe, heavy, bounding pain, extending over one-half of the face, but felt plainly in the tooth and in the temples; sometimes very severe earache. Tooth excessively tender to the lightest touch and loose enough to be perceptibly moved with the fingers. It feels longer than the adjoining teeth, and over its roots the gums are congested and tender to pressure. If the cavity be opened, the pulp will be found to be dead, and the probe passes into the canal. The disease is *acute periostitis*, or as some prefer to call it, pericementitis.

The symptoms of aggravated pulpitis often simulate periostitis, but the tenderness of the tooth is not as marked, and there is not apt to be any soreness on pressure of the gum above the root of the tooth. Ordinarily it is easy to determine whether the pulp is living or not.

Case VI.—Continued pain or remitting pain, tenderness on pre sure, and on tapping the tooth the latter gives a dull sound instead of the clear, ringing tone of a healthy tooth. The pain, though severe, is not as unbearable as in periostitis, and there may be intervals of rest. On examination, pus is apt to be found in the canal, which is also to be found open. The Diagnosis is *acute abscess*.

Case VII.—No pain nor tenderness. Tapping with an instrument produces slightly different sensation from health, but it is often necessary to tap an adjoining tooth to enable the patient to detect the difference. The sound produced by tapping is dull, like what would be produced if the end of the tooth tap rested on blotting paper instead of a hard substance. Examination determines that the pulp is dead. The canal is filled with debris of bad odor; sometimes pus is plainly present. There may or may not be a fistulous opening through the gum and process at the end of the root. A history of gum boil can sometimes be obtained, or the scar may be present. The diagnosis is *chronic abscess*.

These cases are, of course, typical. The symptoms will not be so well marked in all, but practice and observation develop the discriminating power.—*Western Dental Journal.*

Cleaning the Teeth.—Dentists are daily committing the error of not instructing their patients in regard to the proper methods of cleansing their mouths—brushing, picking, rinsing with warm water after meals and at night before going to bed. Our observations must show that people who do those things faithfully, have little or no denistry to do. It is astonishing what ignorance exists among people of all classes and conditions, as to what cleanliness of the mouth means. They will tell you frankly that they do not brush their mouths as well as they ought to, for they did not know they were going to be examined and when you looked, *you really thought so*, and the second thought was *probably not for a month.* Cleanly habits are part of an individual's education and can be formed only in childhood. Too much care cannot be bestowed on the subject for the little ones. Each individual must see it thoroughly done—have it done for him and experience having it well rubbed in with a brush. Not much dentifrice of any kind is needed—small quill tooth picks are best, narrow strips of rubber dam for spaces the quill will not clean. Water used frequently for rinsing, with a motion of the tongue on all the surfaces of the teeth and gums, lingual, palatal, labial and buccal. So much for preventive dentistry which should be our highest aim.—*W. N. Morrison.*

No true professional man completes his education till disability or death arrests his researches, and forever ends his progress. The dentist who is not daily learning is daily decaying. He must make progress or he will inevitably lose ground. "Always a scholor," must be the motto of every professional man. It is only the man blinded by ignorance and indolence that cannot learn.—*Dr. W. W. H. Thackston.*

WHAT LACK I YET?

WM. H. ATKINSON, M.D.

This is the query of him who thinks himself nearly complete, as is plainly evinced by the character of the young man "whom Jesus loved."

Were this query earnestly repeated by each, at every period of his advancement, the impetus of professional progression would be unparalleled. Let each repeat it to himself every day at the close of active projective works, for it is properly the inception of receptive works, so necessary to open our understanding to the full comprehension of the daily necessities of our calling. To recapitulate in the cool moments of quiet reflection, after the excitement and wearisome efforts of the day's toil is past, will enable us to see much wherein we lack of being up to the full measure of perfect works—in understanding, social intercourse, and in performance of true professional service. How often will we see that the financial aspect has too much entered into all these elements of a perfect professional service?

How frequently do we hear the more advanced in our ranks declare plainly that they "work for money!" have "got past operating for the fun of it!" And how very seldom we hear, from the lips of old or young in the profession, the expression of the determination to give the requisite time, attention and earnest, prolonged effort to the accomplishment of whatever they have in hand, in the best possible manner the particular case admits of, whether they ever receive a dime for it or not?

The desire to do a great deal of work in a given time, because of the increased income, dollar-wise, is in fact the almost universal besetment of the professions; and I am sorry that I cannot, even in a small degree, set ours above others in this respect. The amount of good, rather than the amount of work we do, should be the object of desire. All who lack thoroughness will be wofully wanting in the balance; and as earnestness is the primal prerequisite—1st, to thorough understanding, and, 2d, to proper execution of our functions, let us early see to it that we lack not this. Let me, in the most solemn and earnest manner, assert that the very highest possible remuneration to the sensitive professional mind is the certain consciousness of having executed a service above the measure of pecuniary calculation; and also to assert my conviction that the cause of all strife respecting either the diagnosis, execution of, or remuneration for professional service lies at *our* door, and not at that of the patient. For, if we were so truly in earnest, in the exercise of our highest ability at every opportunity for its exhibition, as never to be entrapt into undertaking incompatibilities, we should avoid all collisions as to methods or compensation.

The *professional man* thoroughly prepares himself for the full exercise of his specialty, and then opens an office for the accommodation of patrons. The quack acquires some of the more apparent qualifications for a profession, and in hot haste announces to the public the unparalleled advantages to patrons there is in his peculiar ability to render easy and cheap the services which are difficult and expensive when performed by the skilful practitioner.

New countries are liable to pass the ordeals of quackery before securing professional ability, and all communities are doomed to the same experience in cases of new professions arising on the exigencies of cases or times.

The deepest *hells* of malpractice frequently induce the highest upheavals of competent skill.

Especially has it been the lot of our profession to prove this last assertion; for the bold recklessness of American cupidity and self-sufficient ignorance has shown us, in such multiplicity of instances, the way *not* to go, that *the* way *now* is open to earnest inquiry, in which we *ought* to go, to attain a capability above that of our staid European brethren, who have no such grievous sins to pain them in their remembrance—their sins being but venial in comparison to ours; they have not been convicted of sin at all, for they feel that if they do as their fathers did, they must be in the true path, thus failing, through their very innocence and patience, of the advancement that we have attained by recklessness and restiveness.

The patent recklessness and haste in our whole community are exhibited in the unexampled need for skill in all professions, but especially the *dental*.—*Cosmos*.

Implantation.—At the last session of the N. Y. First District Dental Society, Dr. E. C. Kirk, of Philadelphia, implanted a central for Dr. Bisbee, of Maine, on Tuesday, and on Wednesday a superior lateral for George Owens, a patient of Dr. Sisson. In both cases a fifty-per-cent solution of cocaine was injected through in front of the border of the gum. As little remains in the tissue, a strong solution of cocaine is necessary for the desired effect. In the last case the patient said he only felt the pain from the needle, not the drilling of the socket. The teeth were sterilized in Dr. Kirk's apparatus, giving different strengths of bichloride of mercury, and implanted in half an hour.

Dr. G. L. Curtis, of Syracuse, implanted a left superior first bicuspid for Dr. Lamb, of Port Henry, N. Y., and held it in place with a staple of platina and iridium wire, drilling into it and the adjoining bicuspid and cementing the staple with phosphate of zinc.—*Cosmos*.

A WAVE FROM THE "ATLANTIC."

[Markt letters according to Worcester.]

The *Atlantic Monthly*, renound thruout the world for prezenting on its pajez the best thot and honest culture ov the aj, givz more than tô columz in the Febuery number to a comendashun ov Speling Reform. The rīter beginz by saing:

"A gûd wa to further the simplificashun ov speling wûd be for a few frendz to agre on sertn chanjes that tha wûd be wiling to make, and then to put the plan into operashun in thar corespondens. Several prinsiplz seem to me important to be insisted on: (1.) Az litl diverjens az posibl from the prezent speling shud be alowd. (2.) Every leter and combinashun ov leterz shûd be used with the sound most comon in the prezent speling. (3.) In dīvers or unsertn pronunsiashun, the preferens shûd be givn to that indicated by the prezent speling.

"We ar al nōshunal and tuchy in regard to the speling ov sertn werdz, and we must ūmer ēch uther and expect to be very conservativ at every step. Wun wil be redy to spel "fantom," but wil shrink from folōing the exampl ov Wiclif in "fantum." Anuther wil folo Chaucer in "fredom," but wil stik at hiz "bizy" or "gilty," or "blis." The most radical reformer wûd be surprīzd to find how meny ov the "new" formz ar alredy antiqated, having bin ūzd by gûd âthorz long before the boyz in the erly printing-ofisez began to fix the orthografy ov literary men. From my examinashun ov old buks, I am led to belēv the jurnymen ov erly timz ofn found themselvz short ov "spāsez," and "justified" thar linz by dubling sūtabl consonants, and by ading az meny ov that alredy overwerkt "e," az the sercumstansez made convenient. This aplīz to prōz only, ov corse.

"To help thōz hô ma need presedent for a more sensibl orthografy I hav lukt over the werks ov sum old English âthorz, and hav culd a few ov thar simpler formz, as folōz."

Then cumz a colum ov egzamplz ov simpler spelingz from erly English âthorz. The rīter'z last paragraf iz admirabl. He sez:

"This list mīt be extended almost without limit. I hav purpusly included repetishunz ov the same form from diferent riters to giv an impreshun ov the freqensy with which tha hav bin ūzd. Meny ov them ar wel werthy ov adopshun now, but the list shōz that sum prinsiplz must be desīded on before eny thing els iz dun by the speling reformer. After the thrē that I menshund at ferst, wil cum naturaly (4.) Ech leter and dīgraf must reprezent but wun sound. This bringz up the next qestion: How shal the forty English soundz be reprezented? It iz a rock on which meny elaborate sistemz hav gon to pēsez. *I set my fase az a flint agenst the introducshun ov new leterz,*

and eny fonetic refinments that wûd ad to the intricasy ov the subject under pretens ov making a 'sientific' alfabet. Whot we wont iz sumthing rēzonabl, ēsily understud and not dificult to ūz. The previus list shōz that our prezent speling iz the revers ov âl this, being unrēzonabl, not ēzily masterd, and excedingly dificult to ūz." — *The Speling Reformer.*

AMALGAM IN CONTACT WITH GOLD.

DR. W. G. A. BONWILL, PHILADELPHIA.

A cause of failure in this useful, though much abused article, is that many good gold fillings are allowed to remain on the grinding surfaces where proximal walls subsequently decaying have compelled the use of amalgam, and it is thus brought into direct contact with the gold. Take out the gold if you want proper anchorage, without cutting so much as to expose the pulp on the proximal surface. If you do not, the alloy grows dark and unsightly, and nothing is added to its value for preservation from oxidation. Besides, the tooth is much better supported by all amalgam. If a gold filling needs patching at the cervix, or on any of the margins, and gold cannot be made practicable, then do it with amalgam or pink gutta-percha. I have seen, to my disgust, amalgam fillings patched with gold to set up galvanic action. Oxyphosphate is a good thing on the margins of cavities where the metal would show. It stands well in conjunction; gutta-percha does not.

It is justifiable to allow a contour gold filling to remain in an opposite cavity to be filled with amalgam, for if the latter has much gold in it the color remains quite as good as if touching a similar metal. The security, however, against shocks is to wedge well before contouring, and let them keep in constant contact, not opening and closing a circuit by intermittent touches.

The New-Departure idea that a leak forms a battery where it is against dentos is too trifling. The chemical action, if an acid be there, would take place simultaneously on each, and would dissolve dentos, whether permitted to touch an opposite surface of amalgam or of dentos. The acid will act as a solvent, and not galvanically, and does so just as rapidly and effectually on a smooth surface, at the union of dentos and metal, as at the point of contact. No better evidence is needed to disprove incompatibility as the cause than that, when an amalgam filling is placed in close contact to the proximal surface of a perfect natural crown, so that the same capillary surfaces are made as in nature, decay will as surely go on as if gold had been used. If more compatible than gold, there should have been no caries. This is also a fact when a porcelain crown is placed up tightly against sound tooth-structure. — *Cosmos.*

ARTIFICIAL CROWNS.

Remarks in the Pennsylvania Odontological Society.

Dr. Register:—The subject of artificial crowns and the necessary preparation of the roots opens a wide field for our consideration, and one well worthy of our careful attention. There is no doubt many failures in crowning could be made successes by more careful preparatory treatment of the roots and placing them in a thoroughly clean state by the use of antiseptics and germicides. I feel I ought not to bother you any more with the hot-air theory or practice, and would not if I thought there was any other way to accomplish the same result; but this is my one means, and so uniformly has it been successful that I never have any fear of future trouble when I have thoroughly desiccated the interior of the cavity with hot compressed air.

It is not only the bulbous portion of the pulp that is capable of making mischief, but there are minute portions of matter in all parts of the tooth which, unless they are subjected to efficient antiseptic treatment, will in a short time be in a putrescent state and give trouble. All danger from this source is obviated by thorough desiccation, which can be achieved by subjecting them to a blast of continuous hot air, using platina hair points for the deep canals. I have been using it for five or six years, and have had universal success; I never had to remove a crown to treat the root, after having placed the crown. I treat the roots in this way, and fill with anything I please, with the same success. The bulbous portions of the pulp-cavity may be desiccated by hot air and filled, and the rest of the canals left unfilled.

In regard to the adaptation of the crowns I have used, there are three I regard as best. First may be mentioned the Brown crowns, used in connection with a double ferrule around the neck of the artificial tooth, passing up under the gum, and gripping the root at its neck. In the middle of this collar is a thin diaphragm made of platina plate, the tooth pin passing through it and soldered to place.

There is another crown used in bad cases, not so sightly perhaps as a porcelain crown, confined to the back teeth where the tooth has decayed away below the margin of the gum on one or more sides. It is made by putting a simple band coated with zinc phosphate around the neck, and building up a crown with alloy. This can best be done by inserting the filling with a rotating instrument, and rotating it so rapidly that heat will be evolved, thus allowing the alloy to be used dry, and yet in a very plastic state while being manipulated.

The Logan crown is, all things considered, the best in the market; a ferrule can be made to fit the root, and the Logan crown inserted, to do as good service as anyone can expect of a substitute.

Dr. Bennett:—As to immediate root-filling or crowning, I must say I fail to see how the subject can be made so easy and simple. Yet, I sometimes set crowns at once, and frequently at the second sitting. I have had but one to remove in three years. As long as there is much odor the work cannot be cleanly. If hot air or wire will burn out the gas and cremate the bacteria, nothing is gained by waiting.

President Kirk:—Dr. Parr, we should like to have your views on the subject. Is there any special crown you prefer?

Dr. Parr:—I prefer the collar crown, as it prevents leakage and keeps the root healthy; it will not move and become loose as easily as a crown which depends entirely on pins for support, and which is liable to become loose and admit moisture; decay then takes place around the filling, and the crown drops out. The root of the tooth is also liable to split. On the other hand, the collar crown can be so made that it will be successful even where the root is split.

I always clean out the root, treat it, and put on the crown at one sitting. If there is an abscess, I pass carbolic acid or aromatic sulphuric acid through the canal, and then fill, usually with wood and sometimes with oxyphosphate. If there is no fistula so as to allow the antiseptic to go through, I take an instrument and pass through the alveolar process to the root of the tooth, and so give it exit. I can usually strike the root, and if so, I cut it off. I do not know that I ever had trouble after having crowned a tooth, though I have had plenty of unfavorable cases. I have had teeth that had been fractured by blows from a club or a fist, kicks from horses, and falls. If the root is split, I band the parts together, take a piece of gold to fit the top of the tooth, solder a pin or small plate of platina or gold to it, and cement it in place. It is sometimes necessary to have double ferrules, or have the porcelain come to the edge of the first ferrule, and let the second ferrule surround the root.

Dr. Tees:—What trephine do you use to cut through the alveolar process when there is abscess?

Dr. Parr:—I do not use a trephine, but a rose drill. I cut away the end of the root and break down the diseased parts of the surrounding tissues. I am not particular how much I remove; it is not very severe to the patient.

Dr. Tees:—In the incipient stages of alveolar abscess do you pursue that treatment?

Dr. Parr:—Yes.

Dr. Tees:—In treating molars, do you cut off both roots?

Dr. Parr:—I do not remember that I have met with a molar with more than one root diseased, but would follow this plan in such a case.

Dr. James Truman:—Do you use antiseptics?

Dr. Parr:—Yes, usually carbolic acid. I had a case some time ago of a patient who had a fistulous opening through his cheek. I told him it was from a tooth and that I could cure it, but he would not believe me. He had been under the treatment of several physicians, who failed to benefit him. He told me that they had made several insertions, but all in vain. I removed the filling to convince him I was right, and passed water through the root and fistulous opening out into his cheek. I then cleaned the nerve-canals thoroughly and treated them with dilute sulphuric acid. I left the acid in till next day, then filled the tooth, and have had no trouble since. The fistula closed.

Dr. James Truman:—What do you fill the nerve-canal with?

Dr. Parr:—I usually use orange-wood.

Dr. Kingsbury:—Do you ever have trouble with pericementitis, caused by the force used in introducing the wood into the canal?

Dr. Parr:—No. The wood must not be driven in with a hammer or mallet, but must be shaped to fit the enlarged canal, and a ring cut around the stick of wood at the right distance from the end; after inserting it with just sufficient force to insure its being tight, you can twist it off where it is cut.

Dr. James Truman:—Would you have trouble if this filling of orange-wood did not go quite to the end?

Dr. Parr:—I do not know; I always go to the end. Even if it goes a little farther, it will do no harm.

Dr. Guilford:—When you excise the end of the root, how do you get the piece out?

Dr. Parr:—I do not trouble myself to get it out. Nature takes care of that. I suppose it slips out through the opening made.

Dr. Guilford:—How can you know where the end of the root is? Can you see it?

Dr. Parr:—No, I never see it, but can feel it.—*Cosmos.*

Bridge-Work.—Dr. H. A. Parr, of New York, operated, at the last Pennsylvania Odontological Society, for a patient about fifty years old, from whose mouth the inferior left second bicuspid and first molar were missing; gold crowns were fitted to the first bicuspid and second molar, and the intervening space bridged. All soldering was done at once. The entire operation was completed in about two and a half hours, and the doctor made a beautiful piece of bridge-work. The "flux" which he uses is a preparation of his own, and is of great assistance to him, as the solder flows more freely than with any other; there is no swelling or oxidizing with it. The flux has been placed on sale at the dental depots.—*Cosmos.*

FILLING AND TEETH SEPARATION.

DR. W. G. A. BONWILL, PHILADELPHIA.

We must have much space between molars or we cannot hope for success in contour work, which in my estimation, when properly understood, is the key-stone to keep apart the arches; they certainly collapse as soon as the key-stone is removed. The cardinal principles on which I now act—and twelve years or more attest them—are: First, the proper shaping of the cavities for retention of fillings, and offering least cause for subsequent recurrence of caries; second, the separation of the teeth by pressure slowly exerted, after all weak walls have been removed, till the cervical, buccal, and palatal walls are so far away that nothing but metal can touch metal, destroying all capillary surfaces or tubes for retaining decomposable food at a point for direct action; third, the choice of such materials as we know have proved lasting, and their judicious application to each case, so that nature will not rebel against their use from the want of adaptability to meet the two previous principles; fourth, the best method for introducing filling materials, which, while insuring them for the longest time, is done at the least expenditure of the patient's energy and tooth-substance, and with the least pain; fifth, the second principle is carried out to the fullest by the use of pink gutta-percha as a stopping, which I allow to remain in the cavities till the teeth are separated without any doubt.

As soon as the first piece of alloy is inserted a wad of bibulous paper (Japanese) as large as the cavity is placed thereon, and an oval-pointed steel instrument is pressed on it with great force to crowd out the superabundant mercury. Go on adding alloy and using paper till the cavities are crowded full from cuspid to molar, leaving no intervening spaces. Direct pressure is not as efficacious as rubbing the amalgam in with a burnisher over the paper, which drives the mercury out at all points. No rough-faced instrument should be used; smooth burnishers and oval-faced only, on the same principle as in rubbing in gold by the action of the mechanical mallet. When you have reached nearly the proper fulness, use the flatter burnishers entirely, to not only add the alloy, but to be sure that the mercury is carried to the edges. To do this, you must not lose a moment; and the alloy should not have too much gold in it, or you cannot undertake so much at one sitting. By the time you have gotten all the cavities full, you must commence at once to divide between each and contour.

Never let the patient go without separating the fillings, or the act of mastication would destroy contour. It is not important whether you use Japanese bibulous paper, cotton, punk, the napkin, or any medium whatever—the *principle* of compressing the excess of mercury from amalgam after it is in the tooth is the advance which I claim. Paper or the napkin is best; punk is not tough enough.—*Cosmos.*

WASTE.

The complete erasure of the word "waste" from the dictionaries, at all events in so far as it has any relation to industrial products, if not quite an accomplished fact, is undoubtedly becoming more and more imminent; and we may thank the chemists of this generation for teaching us how to recover and utilize innumerable substances which, our grandfathers in their ignorance, threw away. Thirty years ago the manufacturers of iron, gas, and chemicals everywhere neglected all but the prime objects of their industries, whereas to-day, on the system of taking care of the pennies and allowing the pounds to take care of themselves, competition has induced us to regard our many by-products as so many integral parts or branches of each enterprise. If the intelligent men who have "gone before," and who were looked on by their contemporaries as wise in the generation, could by any chance reappear among us, we might conduct them to our gas works, and with a certain pride explain the origin of our sulphate of ammonia, our aniline dyes, and our hundred other extracts from coal tar. From the contemplation of gas we would turn with them to some of our smelters and furnaces, and point to the mineral wood, the cement, the glassware, the pottery, the fire bricks, and the fertilizer, all derived from our furnace slag; and finally, entering a great chemical works, we would show them how the once devastating gases, so fatal to life and vegetation, are no longer sent free into the air, but are condensed and transformed into staple articles of trade, and how by an ingenious and, to them, undreamed of proces; we extract the precious metals from our exhausted sulphur ores. To their wondering question, "How can these things be?" we might reply that all these marvels result from a modern and enlightened policy, which, in many countries, has fostered every species of research in every branch of science, encouraged great minds to ponder over and gradually unravel the mysteries of nature, and stimulated a general thirsting for that knowledge which, properly applied, must ever ameliorate our condition in this "vale of tears."—*The Age of Steel.*

Vehicle. A Philadelphia physician was called by a foreign family, and prescribed "One pill to be taken three times a day in any convenient vehicle." The family looked into the dictionary to get at the meaning of the prescription. They got on well as far as to the word vehicle. To this they found cart, wagon, carriage, wheelbarrow." After a grave consideration they came to the conclusion that the doctor meant that the patient should ride out, and while in the vehicle he should take the pill. The supposed advice was followed to the very letter, and in the course of a few weeks the fresh air taken so regularly completely cured the patient.—*Cin. Artisan.*

ULCERATIONS AND ABSCESSES.

PROF. L. C. INGERSOLL IN HIS DENTAL SCIENCE.

In probing an abscess through the external opening, the probe follows the fistulous canal, a fibrous soft tissue, and comes in contact with no hard tissue till it reaches the very end. In probing deep-seated ulceration through an external opening, the instrument touches some hard tissue almost immediately, either the root of the tooth or roughened bone. An abscess has a soft-tissue membrane forming a sac, lining the pus cavity in the bone and containing the pus; ulceration in the same locality has no such lining of the pus cavity, the pus freely bathing the surface of the wasting bone and of the root. Abscess involves none of the surrounding tissues in suppurative disease. Ulceration involves all contiguous structure. An abscess voids pus through a formed tube; ulceration through one or several partings through the overlying tissues. Deep-seated ulcerations usually results from the breaking up of a chronic abscess, greatly favored in its progress if there is any scrofulous or syphilitic diathesis.

In treating ulcerations of a root, if any spicula of bone are found loose they should be removed at once. The roughened condition of the bone indicates *caries*. It should be scraped and rendered smooth, the fragments carefully removed. Then apply aromatic sulphuric acid, 50 per cent dilution. This will dissolve particles of bone still remaining, and act as a powerful antiseptic and tonic. For after-treatment, at intervals of two or three days, use solutions of chloride of zinc, sulphate of zinc, eucalyptus oil and creasote, alternately. If pus continues to form after the first application of sulph. acid repeat the application, or use *permanganate of potassa.*

Immediate Root Filling.—Regarding immediate root filling, if there is no periostitis to go through the foramen and fill immediately, as it is not necessary in most cases to wait any length of time. In alveolar abscess we get suppuration and hyperplasia. In pus formation, to relieve the patient from severe pain, while opening an abscessed tooth, tie a strong cord to the neck of the tooth and request the patient to pull on this and not loosen the hold. If the pain is still felt, request him to pull a little harder, and keep this up till you have drilled through the foramen; and if you go beyond the apex a little it will do harm.

Disinfecting is carried to extremes, years ago I used bichloride of mercury for disinfecting in the same manner as that of the present day, for all it is now used *scientifically.*

I do not go much on micrologists. I used to be one of them myself. A man that has been to camp meeting and been converted six or seven times generally knows what he is talking about.—*O. Jour. of D. Sc.*

THREE LACKS THAT SHOULD BE OVERCOME.

DR. WM. H. ATKINSON, NEW YORK.

I. Lack of knowledge how to raise children, displayed in the universal neglect of the essentials of their physical well being, while the souls and minds have been drilled almost to death.

II. Lack of *willingness* to cultivate their bodies in an equal degree to their minds (a fatal mistake to both soul and body). Not one per cent of the parents who have consulted me in reference to their children's teeth were at first prepared to admit, or willing to learn, that the first permanent molars belonged to the adult set of teeth.

III. Lack of confidence in ourselves, which naturally begets lack of confidence in others' ability; and thus a selfish spirit has well nigh prevented the growth of, or crushed out, all true professional confidence and fraternal probity.

The immense preponderance of those who are forced to wear dental substitutes or go without teeth need but to be named to prove the propositions laid down. He who has eyes needs no labored argument on the question, which has thus far held the field in numerical strength throughout the whole range of professional callings, professional men or quacks.

In our department, so wofully has the evil prevailed, that mutilation stares us in the face in our street walks and social intercourse ten times where once our eyes and hearts are blessed with a view of the legitimate success of the accomplished Christian dentist.

It is not so hard to prescribe rules of correct practice as it is to follow them faithfully amid the daily conflicting influences of social and professional contact.

Could the honorable young member of any profession be set above pecuniary want, the first great victory would be won; for then he would scorn to essay the exercise of doubtful ability for the sake of subsistence.

The only unitary reason for any contention about price of service is that each endeavors to cover more ground than legitimately belongs to him, and thus hopes to lay tribute not only on his patrons, but his workman, so that he may gain a competence on which to retire in a *short* time. As soon as any professional man acquires the ability to render clean service, he should have clean pay. Services and remuneration must accord, or equiposity is lost; and then there must be jars to equilibrize them. Hence, the everlasting contentions on the vext subject of price. But prices largely regulate themselves by the quality of our work, and our own estimate of its value.

BRIDGE WORK.

DR. E. R. E. CARPENTER, of Montana, exhibited at the recent meeting of the N. Y. 1st Dis. Society, the following cases of bridge-work: Case 1. Right upper first and second bicuspids and first and second molars to form a bridge, which is to be supported posteriorly by a saddle, anteriorly by a partial cap over the cuspid, and extending and soldered to the backing of a Low crown on the right upper lateral; while a further extension of the bridge consists of a saddle or spur burnished over the palatal surface of the right upper central. Dr. Carpenter made the saddle and partial cap for the cuspid at the clinic, but did not proceed further, except to explain how he would complete the operation. Dr. Carpenter's method of making dies to strike up the saddle is as follows: Take an impression and build a coffer-dam of moldine around the part you wish the saddle to cover, and pour into it Melotte's metal. After thus obtaining the die proceed to obtain the counter-die by building around the die with moldine and pouring in the same metal (as cool as possible). The saddle is struck up from two thicknesses of No. 30 gold plate soldered together. The second case shown by Dr. Carpenter was one of bridge-work for the superior maxilla, and consisted of twelve teeth supported in the following manner: The only tooth remaining in the superior maxilla was the left cuspid, and this with the right and left first bicuspid roots formed the only support for the bridge. A cap was fitted over the cuspid, and Low steps or posts fitted into the bicuspid roots. The incisors were replaced by Dr. E. Parmly Brown's method, and the rest with gold backings. The porcelain face of the right cuspid had broken away and had been replaced by a piece of gold plate riveted to the bridge, to make it look like the cap on the cuspid of the opposite side. Case 3. Bridge-pieces in the lower jaw. On the right side the first bicuspid and first molar were supplied in the following manner: In the right first bicuspid root was put a Low step or post; the second bicuspid was capt, and the first molar was supported by it and a smallspur or bracket extending to and resting on an amalgam filling in the second molar. On the left side three teeth were supplied as follows: The second bicuspid and two molars were attached posteriorly to a cap over the third molar and anteriorly to a partial cap over the first bicuspid, with an extension or spur resting on the lingual surface of the cuspid. This same case presented a specimen of Dr. Land's porcelain facing, wherein a right upper latteral had its posterior border replaced by a piece of porcelain. The method of attaching it was explained by Dr. Carpenter. It is gratifying to know that our fellow dentists to the most remote regions are keeping abreast the times. — *Cosmos.*

GOLD FOIL.

DR. ISAAC N. CARR, TARBORO, N. C.

We see frequent allusion made to the use of soft gold for starting a cavity, and finishing by adding cohesive gold. The term soft gold is a misnomer. All gold is soft in its natural state, and becomes soft by annealing. It can be made cohesive by annealing, and it soon becomes hard under the blows of a hammer. You cannot take all manufacturers so-called soft gold and make cohesive gold cohere to it, even though you anneal both. For example: Take Abbey's soft foil and partially fill a cavity, and then attempt to make the best cohesive gold cohere to it; you will not succeed. You can, of course, so pack your "soft" gold as to leave retaining points for the other, but I affirm, there is no cohesion of molecules. But, if you start with semi-cohesive gold, even without annealing it, the cohesive by annealing, will cohere. I have seen it published in some dental journal, that cohesive gold was discovered by some dentist who was so particular about saving his scraps that on one occasion, while filling a tooth, a piece of the gold fell into the mouth and got wet, but not to loose it, he took it up with his pincers, and carried it through a spirit flame to *dry* it; on introducing it on that already in the cavity he found it cohered, and that in this manner the cohesive quality of gold was discovered. But in fact it is the very thing the gold beaters had spent much time, labor and money in trying to do away with. Charles Abbey, of Philadelphia, I believe was the first to discover the process by which he was enabled to manufacture his soft foil, which, strictly speaking, is *non-cohesive foil.* It is a process known only I believe to the gold beaters; I certainly have never been able to discover their secret.

[Some gold foil is soft *and also* cohesive. These two qualities combined is now the aim of all manufacturers, though all have not succeeded to the same extent.—ED. ITEMS.]

Filling Dead Teeth, Dr. Conrad says: I treat these teeth and in almost all cases fill immediately. After examination wash the cavity with peroxide of hydrogen and go carefully to the end of the root, and when you know it is clean, fill it. When you find a molar with a calcarious deposit in the pulp chamber, you may think there is no opening into the root canal, but there is, and unless you go through this you will be liable to have trouble. When a root is filled to the apex perfectly with a hard substance, you should never have any trouble. My creed is, wash the cavity thoroughly with warm water and then peroxide of hydrogen. Be cleanly, thorough, and open into every root canal. Never let a cavity go unfilled where there is a bit of pulp tissue, and never let a root go till it is filled to the end.

LIBERAL MEDICINE.

J. P. WIDNEY, A. M., M. D. Men sometimes ask me of what school of medicine I am. I am always puzzled to answer.

Schools in science imply distinctive theories or dogmas. As there are no such distinctive theories or dogmas to this, it can have no specific or definite name. It is simply the science of medicine, as one speaks of the science of chemistry, or of astronomy. I can only reply: "I am a physician; and my system is only known as the science of medicine; because of its freedom from hampering dogmas, and instead its search after causes, it might be termed Rational Medicine—sometimes called Regular Medicine. It is sometimes, by persons unacquainted with it, called Allopathy, but mistakenly. It might as well be called Hydropathy, or Homeopathy, or Electicism; it is neither. And yet, in a certain sense, it is all of these; for all of them are only one-sided views of some phase of its broader and more rational development. As before stated, distinctive names imply dogmas, and dogmas are narrow and one-sided. They belong to the early, the youthful, the immature ages of science. Schools of medicine or of any science, belong to a lower plane. On the higher plane of true science schools drop away. Science is one. There was a time when one might ask of an astronomer, or of the chemist, to what school of astronomy or chemistry do you belong? Now we do not ask so. With increasing knowledge the schools have dropt aside. Now the reply would be simply: "I am an astronomer," or, "I am a chemist."

So in medicine. Rational Medicine has passed beyond the narrowness of restrictive dogmas, and calls itself by no distinctive name. It is only The Science of Medicine; and its practitioners call themselves simply physicians.—*Cal. Practitioner.*

Hullihen's Scriptural Explanation of the Cause of Dental Caries.—The following anecdote, taken from the biography and memorial of Dr. S. P. Hullihen, of Wheeling, Virginia, has not received what it deserves—a general circulation among the profession: "Hullihen had encountered some ungrateful cases that were not a little trying to his patience, when he was applied to by a country gentleman of the pulpit, with very miserable teeth—one indeed who had only a sad array of decayed fangs. This patient expressed great wonder as to the cause of diseased teeth, and their loss, when life was scarce half over. 'It was unnatural; it could never have been the design of Providence!' and he wished the doctor would explain the mystery. The general causes that lead to decay and loss of teeth were very carefully gone over by the doctor, and the visitor, with a mind apparently enlightened and satisfied, left the office; but in a day or so, the same gentleman returned, and again he wanted the doctor to tell him *why* it was that

teeth decayed; why *he* should be thus sorely afflicted so early in life. A little impatient at the evident inattention to his previous explanation, the doctor now said: "Well, sir, I very recently gave you a *professional* view of the causes of decay in teeth, which you seem not to have understood; so I will now give you a *scriptural* explanation of that misfortune, which you will understand. You are, of course, conversant with the scriptural history of the forbidden fruit and the sin of our first parents; you must perceive that when Adam and Eve ate the apple, they bit it with their teeth; of course, then, the teeth being the immediate instruments of sinful disobedience, it was right that the teeth should be the greatest sufferers for the offence. Therefore, we may conclude that, whenever a man has very bad teeth early in life, there is an unusual amount of old Adam in his nature.'"—*Cosmos.*

Dr. Haskell's Book on Prosthetic Dentistry.—Dr. Thrasher, editor of the *Cincinnati Medical Journal* says: We always read everything in the dental periodicals from Dr. Haskell, because his articles invariably contain short and useful opinions and hints about his specialty of the dental art. It is, then, with a sort of internal satisfaction that we received this little work of seventy or eighty pages from the Doctor's pen. It was written at the urgent request of members of the dental profession, and is a valuable hand-book for the practitioner of "mechanical dentistry."

It is by no means a text-book on the subject, suitable for the beginner. It is rather a series of decisive hints to the practitioner from a man thoroughly familiar with his subject, and thoroughly convinced that his methods are short, practical and successful for the accomplishment of their objects. It is the work of a master in the *art* of mechanical dentistry, and as such is a valuable contribution to dental literature. The sentences are so decisive, the assertions are so positive, the descriptions are so clear to the practical man, that, as it seems to us, the little book is fully worth its price to every man engaged in dental practice or to every man engaged in a dental laboratory. While the volume is divided into twenty chapters, one of these chapters contains but three sentences. Truly, we have before us *multum in parvo.*

The Office.—The general dinginess and uncleanliness of many dental offices is a great hindrance. There is an indefinite charm about a cozy, homelike office, clean and neat in all its appointments that with a cheerful and pleasant face, has a power to "draw." The man makes the office, but the office is a great help in making the man. Clean up, brighten up, wake up and climb up higher.—*Practical Dentist.*

PHAGEDENIC ULCERATION.

PROF. L. C. INGERSOLL.

This is a disease involving the gum, paries of the alveolus, and the alveolo-dental membrane in a peculiarly destructive process without the ordinary indications of inflammatory action in the surrounding tissues, wholly unlike peripyema and deep-seated ulceration, and also unlike the ordinary surface ulceration. It is characterized by making progress in straight line from the margin of the gum to the apex of a tooth-root, destroying all the tissues covering the root, without any tendency to spread laterally, unless encouraged by other causes operating to inflame the gum. It is more commonly found in cleanly mouths well cared for than in mouths neglected; it is not noticeable as a pus-forming ulceration; it is of the fungoid type; the name *phagedenic* signifies a *gnawing, eating* ulcer. From the margin of the gum, and leading toward the end of the root, is seen a row of beaded tumefactions or fungi, doubling on itself as it returns from the apex of the root to the margin of the gum, leaving a clean exposure of the root between the rows of tumefactions.

Treatment.—As in case of other tumefactions, *excision* is the proper treatment. With a curved bistoury enter at the margin of the gum, just within the limit of the healthy tissue, cutting entirely through to the alveolar process, and following the entire length of the diseased margin, dissect up the entire tumefied line; scrape the margins of the tooth-socket, cauterize with carbolic acid, cauterize again the third day after the operation, then give occasional treatment with mild stimulants and tonics. A strong decoction of tea is recommended.

Discussions on Root Filling. Dr. J. Taft says: There is wonderful unanimity in all these discussions. Every one has said he thinks roots may be filled as soon as they are ready to be filled. This cannot be denied. We have a great variety of cases presented to us, and we must take the accidental changes into account. If a patient presents himself and the surrounding circumstances are favorable, you can fill at once; but if a portion of pulp tissue or decomposed matter remain, it is not advisable to do so. Test this by placing a small pledget of cotton into the cavity and leave it for several minutes, then remove. If the cotton smell offensive, and you close the cavity, you will be liable to have trouble. If there is diseased tissue that needs to be disposed of at the end of the root, break it up. If this is not necessary, get the root into the best possible condition and seal with chloropercha, being careful to avoid pressure. Care should be exercised in using carbolic acid. It is used too much. Apply the dam and use hot air as a coagulator. All these and other things should be taken into account before filling.

PERIPYEMA, "PYORRHEA ALVEOLARIS," SO-CALLED.

PROF. L. C. INGERSOLL IN HIS "DENTAL SCIENCE."

The best known feature of the disease is a discharge of pus around the necks of teeth from a locality of variable depth and extent, and immediately surrounding the affected roots. The tissues involved are alveolo-dental membrane, the parietes of the alveoli and the intra-alveolar bone. Its etiology rests in vague theories; that it is syphilitic—a mercurial disease—a catarrhal disease—a contagion propagated by micro-organisms—that it is a premature senile development occasioned by general physical depravity and lack of nutrition.

Treatments likely to prove successful are surgical, disinfectant, antiseptic, stimulating and tonic. First, remove all granules of sanguinary calculus if such are found on the roots. Scrape the careous bone, being careful not to cut or injure the *ligamentum dentium* or membrane forming the margin of the gum. Sulphuric acid is objectionable because of its rapid action on the enamel. As a disinfectant and antiseptic, use chloride of zinc or permanganate of potassa; for tonic and astringent effect, use sulphate of zinc; for stimulating effect, use wood creasote and the essential oils; for success, use *persistence.*

Sweets constitute an important part of our diet. Children are bribed to do plain duties, by promises of more sweet-meats. Drinks which would have been sickeningly sweet to a palate of years ago, are daily demanded by children of our day. Syrups to excess are used daily in all families. Milk and eggs are ruined in their healthful simplicity by the addition of sugar and lemons; and other mixtures are made that deprive the teeth of use in mastication and furnish the secretions of an abnormal quality favoring destruction by decay.

I have watched with much interest and sadness, the teeth of children in families where much sugar was used and invariably their teeth were bad. One family, relatives of mine, used four barrels of sugar a year. When adult life was reached, there was not one mouth with the full quota of teeth—all had extensive fillings made, and two of the young ladies have their mouths full of crockery substitutes. Employees of long service in confectionery shops and candy factories are also affected in the same manner. It is the excessive use of these articles, simple in themselves, which is doing the irreparable hereditary damage.—*W. N. Morrison.*

We do not often call attention to thoughts from the profession, but the article from Dr. Haskell, on another page, gives suggestions so valuable we must say, read it, and then make it a special study.

Pyorrhea Alveolaris.—Dr. A. W. Harlan, of Chicago, operated at the late First District Dental Society, for a case of pyorrhea alveolaris. In removing the serumal deposits he used his own form of instruments, involving a push motion, going two-thirds the length of the tooth, or beyond the bifurcation of a molar. The pockets were syringed out with a one-in-a-thousandth solution of corrosive sublimate, and peroxide of hydrogen, as a disinfectant and germicide, followed by a ten per-cent solution of resorcin in four days, and repeated eight days after the operation, which is usually sufficient to effect a cure. Dr. Harlan described an original method of operating for recession of gums at the necks of teeth. After removing deposits around the roots of teeth, a crescent-shaped incision is made through the gum about a line from the gingival margin, cutting to the alveolar process if present, if not to the root. Fill this incision with granular iodide of zinc, as a stimulant and irritant, which usually forces the gum by the formation of new tissue in the incision to its original position. In case insufficient new tissue is formed at the first operation two vertical incisions are made, and again packed with iodide of zinc. Fifteen days should elapse between the first and second operations, and in no case cut so as to open or destroy the gingival margin of the gum.—*Cosmos.*

Require Prompt Pay.—There is but one way that exact justice can be attained by all, viz.: require prompt pay. After all, this is the great peacemaker, for much service is quite satisfactory when paid for that would be the source of contentions, heart-burnings and misrepresentation if not settled for at the time.

I have never known a fee-bill to be lived up to for any considerable time by all the members of the body establishing it, either in law, medicine, surgery or dentistry, any more than are the rules proposed for the regulation of trades and commerce in general. Infraction and smuggling are practiced everywhere.—Wm. H. Atkinson.

Bridge-Work Flux.—A fluid that is exceedingly useful in bridge-work is prepared as follows: Put in a cup boracic acid, 1 oz.; ammonia, ½ oz.; carbonate of ammonia, ½ dwt.; bicarbonate of soda, 2 dwt.; and water, 4 ozs. Boil until the fumes of ammonia are no longer given off. Coat the bridge or other work all over the gold with the flux. Heat it over a spirit-lamp to dry it on. Give it another coat, if needed, leaving no part exposed. Then scrape off where it is desired that the solder shall flow, and it will go nowhere else. The work will come out of the heating as bright as when it went in, and the solder will be smooth. The polished surfaces will not be corroded or blackened.—Howe, *Independent Practitioner.*

Why the Difference.—Why is it two men of equal ability apparently, will work along side of each other for years, and steadily the one will rise to higher ground and win, while the other falls behind, takes a lower position and gradually loses heart and fails—drops out of sight and dies professionally. One has an overmastering purpose that inspires him to constant effort, while the other only drifts aimlessly along, taking what comes, but never dreaming of forcing Fate to yield up the success he longs for. Nothing is denied to indomitable pluck backed by good judgment and persistent, earnest endeavor.—*Practical Dentist.*

Have a Pride to Excel.—No man can succeed in any calling, who does not take pride in his chosen work. If he labors because he must, it is simply labor, and the results are brought forth through much mental agony and travail. Many get discouraged because the expected measure of success has not come. The very delay may be the discipline most needed. Success that must be struggled and fought for will be appreciated in proportion to the effort necessary to win it. That only is success which is won, and one of the best helps to its acquisition is a pride in your chosen calling and a purpose to excel in it.—*Practical Dentist.*

Ingrowing Toe-Nail.—Dr. J. McF. Gaston (Gaillard's Medical Journal) advises the following procedure: Cut a crescent or arc out of the front part of the nail, leaving the corners projecting, and scrape with glass the central longitudinal line from the root to this curve, so that the nail may be arched and yield in the middle. Place cotton under the offending corners, and apply a compress or collodion to the exuberant flesh. In a few days the arched form of the nail disappears, and the edges do not irritate the flesh and a radical cure is effected without pain or mutilation.

Useful if True.—A fly always walks upward. Put a fly on a window and up he goes toward the top; he can't be made to walk downward. My friend made a window screen, divided in half. The upper half lapt over the lower, with an inch space between. Well, as soon as a fly would light on the screen he would proceed to travel upward, and would thus walk straight out doors. On reaching the top of the lower half he would go outside. Not being able to walk down he had no way to return to the room. By this means a room can be quickly cleared of flies, which always seek the light.—*The Doctor.*

Let us give this a practical test, and report the result. Many a good thing dies for want of trial.

For Our Patients

VOTE RIGHT.

Better be mum,
And always dumb;
Than pray with some
'Thy kingdom come!'
Then vote for rum.

M. J. F.

Just take the kicks
Amid its freaks,
Than use the tricks
Of politics.

Yes, better die
Than thus defy
The orphan's sigh
And widow's cry.

Ah, be a man
Without a ban;
But in the van
Help those you can.

Be always true
The world through,
And never do
What you will rue.

T. B. W.

THE TORTURES OF THE DENTAL CHAIR.

BY A. SPYER.

[Written for DR. ———, who has spent with me so many profitable hours.]

Pause for a moment and reflect if you have done a mean thing. Were you always fair and aboveboard with fellow men? What was the meanest thing you ever did?

I'll tell you the worst thing I ever did, and I fear for my life that the memory of it will haunt me to my grave! I stood in a dentist's hall one day, before his door was open. A lady came up the stairs, glanced at the red card saying civilly, "Come in," and in she tried to walk. The sarcasm of that placard within a fast locked door! As she went down the stairs the hideous resolve formed itself in my mind to witness what *pleasant (?)* thing she sought inside that door. Soon the dignified doctor of dentistry arrived, applied his key, and entered.

The young lady returned, and this time found she could accept the placard's invitation. While both were talking a few moments in the front room, I entered at another door, and being a thin man, took my stand at the end of a tall bookcase. (May gentle fortune not requite

the evil deed !) All trustingly, dressed pertly, the dainty Miss ascended the awful chair. I cherish to this hour the compassionate pang I felt for her that moment.

Before her was drawn out a little shelf, and a number of delicate, fatal instruments were spread out as if it was for her to choose by which one she should be slain. Nay, she should not choose *one;* the dentist will choose *all !* Fearing she reads his thoughts, the good man begins to talk—now of the weather, the latest death, the frequent marriages, the season past, the last night's lecture, and so on. In the mean time he has tipt back her head, opened wide her mouth, inserted a mirror and a *spear* and begun his work. I know these gentle ladies love to talk, and all the pain she bore was doubled because she could not even answer yes or no, or manifest an interest in all he said.

I longed to be a mirror that I might entertain her by showing how she looked, reclined at (seeming) ease, with her head at a most ungraceful angle, her mouth perpetually gaping, and the teeth usually seen in "pearly gleams through rosy lips," now painfully exhibited.

> "O wad some power the giftie gi' us
> To see oursels' as ithers see us !"

To entertain herself she counts the strips of paper on the ceiling; she notes the cracks behind it in the plaster; she makes an estimate of last year's flies, on the standard of six spots to a fly; and still her mouth is opened to its widest extent. She glances toward the bookcase and reads such charming titles there as "A System of Horrible Dentistry;" "The Theory and Practice of Torture"; "The Science of Killing"; "Prehistoric Teeth"; "Dentistry the Salvation of the Race." Just then the doctor turns back her head a little farther, and introduces his tiny grindstone. A sudden smothered shriek almost brings me from my hiding place to offer her my handkerchief.

Presently he finds that is not bad enough. He shapes a little wedge and forces it between her suffering bicuspids. Ah, now she weeps, poor lady ! Does he relent? Oh, no; he sees as I do that her tears are not the sweet drops from wounded heart or conscience, but are hot angry tears. She makes a spiteful dive with her handkerchief to wipe them off. Then comes the hammering. She shuts her angry eyes. The filing is begun. The fair hands grasp the chair arms; she strikes impatiently with her feet; the cold sweat gathers under her tumbled bangs; her brows are so drawn into knots I fear they will never be straight again. And still he files as undisturbed as if he murdered victims every day and expected them to squirm. His file breaks. Sudden visions of liberty flit through the suffering head. "Good !" I hear her mutter with some energy. He takes the other end and calmly answers, "There's plenty more where this one came from !"

At last the task is done. He offers her a looking-glass that she may see how well the work is done. Man do you think she will be pleased? See how she notices first the red lids of her eyes, her tumbled hair, the pallor of her cheeks. Every tooth in her head is aching, I know, and her tired jaws shut with a slam as if the hinge was rusty. And how much will he charge for the suffering she had taken at his hands? Oh, the audacity! The dentist gives the bill, and she succumbs without a struggle. She who came in so gay and fresh does not trip out as she tript in, but humbly hurries away, a sadder and a wiser woman.—*Ohio Journal.*

Prejudice against Amalgam.—Dr. Francis of New York, says:—There are physicians who are prejudiced against amalgam. I have had some experience with homeopathic physicians in efforts to combat their prejudices concerning amalgam fillings and rubber plates. A lady came to me many years ago, showing much excitement, declaring that I had poisoned her daughter by putting amalgam fillings in her teeth. She stated that her child had been treated by her physician for a long time, but with no benefit whatever, and he finally decided that his failure was due to the presence of mercury in her teeth, which operated against his remedies, and counteracted their effect. I requested her to bring her daughter to me. She did so, and I examined her teeth, finding four or five gutta-percha stoppngs, and two oftin-foil. No amalgam had been used, and I was almost sure of the fact previously. I was quite indignant to be thus charged with employing fillings affecting the child's health, and sent a sharp message to her physician in return. There is still much prejudice against the use of amalgam, and fears that the mercury will poison the patient or cause salivation. All this I consider absurd. My chief objection to amalgam as a filling is that it is not always reliable. Though I have seen a great many such fillings which have been in the mouth for years, and done excellent service, I have seen others which in a comparatively brief period have failed, the amalgam either receding from the cavity margins or the cavity margins decalcifying around the fillings. I suppose we must be more careful what amalgam we use and how we use it. To-day a lady requested me to fill a tooth with amalgam, and I did so. The cavity was on the posterior surface of a second bicuspid. In her teeth were a number of amalgam fillings, and all doing good service. One in a superior cuspid was perfect in color, and caused no discoloration to the tooth. So far as the chemical effect of amalgam on the system is concerned, I would not take it into consideration for a moment. Let us do our work with amalgam as thoroughly as that of gold, and we shall have less of these chemical effects.—*Cosmos.*

TAR SMOKE FOR DIPHTHERIA.

Ruth Lockwood, the nine year old child of Thomas Lockwood, a compositor in the *Times* office, New York, became violently ill with diphtheria recently. She was so weak that it was deemed dangerous to try tracheotomy, or cutting open the wind-pipe. On Thursday Dr. Nichols, of 117 West Washington place, who was attending her received a copy of the Paris *Figaro* which contained a report made to the French Academy of Medicine by Dr. Delthil. Dr. Delthil said that the vapors of liquid tar and turpentine would dissolve the fibrinous exudations which choke up the throat in croup and diphtheria.

Dr. Delthil's process was described. He pours equal parts of turpentine and liquid tar into a tin pan or cup and sets fire to the mixture. A dense resinous smoke arises which obscures the air of the room.

"The patient," Dr. Delthil says, "immediately seems to experience relief; the choking and rattle stop; the patient falls into a slumber and seems to inhale the smoke with pleasure. The fibrinous membrane soon becomes detached, and the patient coughs up microbicides. These when caught in a glass, may be seen to dissolve in the smoke. In the course of three days afterward the patient entirely recovers."

Dr. Nichols tried this treatment with little Ruth Lockwood. She was lying gasping for breath when he visited her. First pouring about two tablespoonfuls of liquefied tar on an iron pan, he poured as much turpentine over it and set it on fire. The rich resinous smoke which rose to the ceiling was by no means unpleasant. As it filled the room the child's breathing became natural, and as the smoke grew dense she fell asleep.

HOW OLD ARE YOU?

Girls of a marriageable age do not like to tell how old they are; but you can find out by the following the subjoined instructions given by the *Chester* (Pa.) *Local News*. Let the young lady do the figuring.

Tell her to put down the number of the month in which she was born, then multiply it by 2, then to add 5, then to multiply it by 50, then to add her age, then to substract 365, then to add 115, then tell her to tell you the amount she has left. The two figures to the right will denote her age, and the remainder the month of her birth. For example, the amount is 822; she is 22 years old, and was born in the eighth month (August). Try it.

We ought to regard books as we do sweet-meats, not wholly to aim at the pleasantest, but chiefly to respect the wholesomest; not forbidding either, but approving the latter most.—*Plutarch, A. D. 100.*

MEHARRY MEDICAL AND DENTAL COLLEGE FOR COLORED STUDENTS.

The twelfth annual commencement exercises of Meharry Medical College, and the second of the dental school of the Central Tennessee College, were held at Nashville, February 20, under the most favorable circumstances. The degree of Doctor of Dental Surgery was conferred by J. Braden, D. D., upon Henry Lewis Smith, Bastrop, Tex., and Claude Melnotte Wade, Hot Springs, Ark.

The Meharry Medical Department of the Central Tennessee College was founded in 1876. It was designed for the education of colored physicians. It takes its name from the family who have so liberally aided it from the beginning, and to whom, above all others, it is indebted for the success which has attended its course.

The course of study requires three years. It comprises the branches usually taught in medical colleges. During the past twelve years ninety young men, including the present graduating class, have completed the required course and have received diplomas.

The past session has been the most encouraging that this college has enjoyed. Sixty-two students have been enrolled, and the present graduating class is nearly twice as large as any that has preceded it.

The school of dentistry has just closed its second session. There is a fine opening for colored dentists there, and this school is ambitious of furnishing facilities equal to any white dental college in the South. It has received the indorsement of the Southern Dental Association, and belongs to the American Association of Dental Faculties. Plans for a new building have been prepared, and it will be erected as soon as the necessary funds can be secured.

The *Nashville Daily American*, in an article on "The Negro," comments on the present relations of the negro as regards education, as follows:

"The commencement exercises of the Meharry Medical College, which we published yesterday, to an interested observer, were not simply impressive, but they set the mind of the thoughtful man going, and it rapidly travels over a wide field.

"Twenty-five years of a trial of so grave a question as the joint occupancy of a country by two distinct races of people is too short a time to unerringly point the result. Much, however, has been determined in this twenty-five years, especially when taken in connection with the previous relation of the two races. We do not purpose to discuss or compare the intellectual powers of the races. That the negro is exhibiting more intellectual force than many supposed who saw him without education and with the information which reading only can give, is a fact which we suppose but few people would deny.

Editorial.

MAKE YOUR WORK A PLEASURE.

We feel as awkard in speaking on this subject as when lecturing on intemperance: we have never experienced the misery of intemperance and therefore can only speak as an observer. So we have no experience in having an unpleasant vocation, and therefore can speak only as an observer. We have been so fortunate as always to have had work that pleased us.

But we believe, if we were ever so unfortunate as to have a work that was irksome, we would forthwith look for something pleasurable in it to relieve its irksomeness. And they say "what we look for we usually find." It is something like the weather. There are persons who are never satisfied with it. If a day does chance to suit them, it is looked on as "a weather breeder"—a sure precurser of a storm. We said to a friend the other day who was complaining of the rain, that we had not seen a day of bad weather for twenty-five years. "O well," said he, "I suppose it is wrong to be always fretting about the weather; we have got to take it as it comes." But even this is not the spirit in which we should view either our work or the weather. We should not only be willing to tolerate it, but to meet it with cheerfulness, and to enjoy it. The weather is just right. It must be, for it represents God's wisdom and goodness; and the better we live in harmony with His laws, the clearer we shall see its adaptation to the world's best good. Besides, if we do not like the weather of one section, He has given us the means of locomotion to take us to another section, and surely we ought to be pleased somewhere. So with our work: it is given to us for our greatest good; aud we have our choice of such a great variety, it is a pity if one of its many phases cannot suit us; generally, if it does not, the fault is within ourselves.

Simplifid Speling. That eny wun shud object to a more simplifīd and corect speling then the prezent is past our comprehenshun. In fact, al rezonabl objecshun wud vanish if our lēding rīterz, *that beleve in the reform*, wud practis it. But we ar so weded to whot *iz*, we canot chanj for that which we no iz far beter. The simplifīd speling we ar here uzing, tho much beter than our comun othografy, iz not so good az pure fonetics, but it ma be les objected to by conservativz. We sertinly can ask this much. It iz dificult to make an alfabet ov twenty-six leterz reprezent the forty sounds ov our werds, but we can do our best. Why not do that best now? In uzing our common speling we ar doing our werst. Rēder, why not do *our* part *now*. It reqīrz no extra lerning, no muny, no time, no sacrefis. It iz only to

do what we can do ezily. Ar u rīting to a frend? Just rīt at the top, *In simplifid speling*, and prosēd. A few leterz wil hav to be markt to sho the sound intended, but a haf our'z study ov them az givn by Webster wil make thar use familiar; and if u ar in dout az to the pronunsiashun ov a werd, Webster wil inform u. It wil be much ezier than u supōz, much ezier than ordinary speling, and can be ezily red. When u hav becum profishent, send a short articl to ur nērest newzpaper in the same speling. Don't be afrād ov ridicule. Ther iz litl dun to make this werld beter, that iz not laft at az rediculus or impractical; but its acomplishment makes the dōerz hērōz. Tho it takes more than wun jenerashun to acomplish it, sum wun must comens it; Why not u? And if forsooth, the beginerz ar forgotn; What then, if the werld iz benifited?

Ther iz a mity diferens in eny reform between the wa the masez vēw it before and after its adopshum. The objecshuns to it ar wunderful in strength and number while it iz unpopuler, and advocated by only a few, but when it haz wuns strugld thro thēz objecshuns, and loomz up into the esthetic atmosfere ōv popularity, then our most conservitiv brethren wunder hô tha wer that opōzd it.

Why not look rēzonably on whot iz prezented to the jujment? Why not thro awa naro prejudis, blinding selfishnes, and proud bigotry, and investigate, rēzn, and adopt *on its merits*, or reject on its demerits? It duz not sho manlines to laf at whot iz in itself desirabl becoz it iz unpopular, or to uphold an absurdity becoz it iz popular. Let us sho by the curej ov our convicshuns, by the manlines of our rēzn, and by the trīumf ov our wil, our ability to asert whot iz true, to embrās what iz rīt, and to clēv to that which iz good, tho the hevnz fal.

Rectitude in Youth.—You who still linger on the threshold of life, doubting which path to choose—the one which, through much painstaking and self-denial, leads up to honor and success; or the other which, through self-indulgence and indolence, carries you down to disgrace, dishonor and want, remember, when years shall have passed, and your feet shall stumble on the dark mountains of regret, disappointment and gloom, you will cry bitterly: Oh, youth, return; oh, give me back my early days. But they cannot return. Regret, nor even repentance, nor genuine reform, will bring you back your innocence, nor that exquisite pleasure youthful rectitude brings when ripened into the luscious fruits of a matured virtuous life.

"Gentlemen," said a professor, "I begin to-day my lectures on the practice of medicine. When a man is sick, nature and the disease are in conflict. The physician comes in and strikes at the disease. If he hit it, the man gets well; but—if he hits the man, it is all up with him."

PROSPERITY AND ADVERSITY.

The conditions and surroundings of life are largely what we make them. This is the case, first of all through our direct influence. Prosperity and adversity are generally the effect of conduct. Industry, thrift, skill, discretion, and principle underlie the one; idleness, extravagance, self-indulgence, and folly the other. As a general thing, we reap that which we have sown. But where it is not so, where circumstances over which we had no control come in the form of trials or joy, even those are modified by the spirit in which they are received. Who has not seen poverty or sickness or bereavement borne so heroically and cheerfully that the afflicted one seemed rather an object of envy than of compassion? On the other hand, who has not seen one with every outward advantage that earth can bestow rendering himself and others miserable by fretful complaints of troubles too petty to deserve a moment's notice? The faithful endeavor to do right and to bear quietly what must be borne is of itself a fruitful source of happiness and serenity; while a murmuring and discontented spirit may imprison the richest blessings and turn them into bitter evils.

What an inspiring energy of civilization is sweeping over the world. It is becoming irresistable; and largely it is the force of the anglo-saxons. As these pioneers penetrate to the uttermost parts of the earth, they take their language. This is unifying the mighty movement. But its written signs are a disgrace to its age and its dignity. These should be as significant and symmetrical as its spoken sounds. As these latter sparkle from the lips and blaze into sentences of euphonious sounds, they produce floods of light that is attracting the world; but the written representations of this superb language is such a burlesque it makes the very heathen laugh.

Who will not aid in the movement to throw back to barbarism from whence it came this miserable babyhood of swaddling cloths consistent only with its infantile babble of long years ago, but which now so impedes its progress! And who will refuse clothing consistently representing its present intrinsic beauty, intelligence and goodness?

Nansook Muslin as an Absorbant is but to be used to be appreciated. It should be of fine quality, quite thin and soft. Tear it in pieces of about 4 by 6 inches. Place dozens of them within easy reach in a drawer. They are very nice to dry a cavity of a tooth, and answer many other purposes. With them there is no further need of spunk or bibulous paper. The more times they are washed and ironed (of course, without starching) the better they are, till quite worn out.

Have we bogus Dental Colleges among us?—This inquiry comes to us from various sources, and there are some intimations of irregularities that point, at least, to a second growth in this direction. Much laudable work has been done to root out these fraudulent institutions, and we know of none now that are open to public sensure. If any one does, we shall be glad to hear from him.

The Standing of our Dental Colleges.—The inquiry just made concerning bogus colleges, provokes the thought that few of our Dental Colleges, or Dental Departments of our Universities are as good in discipline and thorough in teaching and clinic and laboratory work as we could wish. The nasty tobacco is in every room, and the concomitant spirit of rowdyism is allowed in every department. *Discipline* in morals, behavior and thorough scholarship, seems to be hardly attempted. Many of the lectures are shallow; the studies are irregular and superficial, and the means taken to see that the instruction given is understood, are seriously defective. The consequence is, a large number graduate with little better preparation for dental practice than they should have had under their preceptor before entering college; and as for the attainment of all those qualities which go to make up the *gentleman* and to prepare them to meet the esthetic demands of a *profession*—well, they have gained nothing—they have lost much, in the very institution where they should have learned and practiced everything.

Our college students must be made to understand by the discipline, the thoroughness, and the moral standing required, that graduation means all that the college certificate indicates. And in justice to thorough students who cannot attend college lectures, a diploma of qualification should be cheerfully accorded to *all* who can creditably undergo the final college examinations of the scholars of the school.

But the standing of our dental colleges cannot be what they should be till they are brought on to a financial basis that will enable them to employ first-class talent, and that talent employed exclusively in the interests of the school. We have too many "professors" who are not more than second-rate operators, and who, even at that, divide their time and thoughts and interests between their dental office and the college. Of course, their lectures are superficial, and much of them garbled extracts from the writings of other men, with the demonstrations of their teachings no better.

In the laboratory and clinic room of our colleges, where the best of teachers should be placed, one too often finds "substitutes," or at best indifferent operators, and the students are frequently left alone when a good instructor should be at their side.

B. H. CATCHING, D.D.S.

Dr. Catching, whose portrait we present in this number, is the honered editor of the *Southern Dental Journal,* and has been since its start in 1880. Being the first southern dental journal ever projected it was quite a venture, and many prominent dentists were confident it would have a short life; but the popularity, intelligence and long dental experience and skill of the Doctor were so prominently shown in its conduct, that it soon took rank among the first dental journals of the country. No doubt the *Southern Dental Journal* has done more to bring the practice of dentistry in the whole South to a high standard, than any other agency. Dr. Catching is an enthusiast who has the faculty of imparting his enthusiasm to all within his reach.

Nearsightedness.—Our work as dentists, as well as those reading and writing much, and of women sewing and doing fine embroidery, tends to make us nearsighted. As an antidote we often resort to glasses. Most persons finding their sight thus impaired will find great relief by spending much time in looking at distant objects while walking or riding; instead of spending the time in looking at objects near by, train the eyes to distinguish landscapes and special objects at a distance. If this is done frequently as a relaxation from our usual occupation, it will prevent nearsightedness and wonderfully improve farsightedness.

At Barre, Vt., is being quarried an immense block of granite to be used in a California bank vault. It is to be twenty-five feet long, five feet thick, and five feet wide, and it will require thirty span of horses to draw it four miles to the railroad station.

We are glad to see Haskell's work on Prosthetic Dentistry appreciated. Dr. H. is a workman of so much intelligence and such a tony experience, that every dentist may learn something by his instructions.

The National Dental Association of the United States of America will hold its next regular meeting at Washington, D.C., July 24, 25, and 26, 1888.

For this meeting, as for all former ones, the authorities of the Smithsonian Institute have kindly granted the use of the Lecture Hall of the U. S. National Museum.

All members of the profession in good standing are invited to be present. R. FINLEY HUNT, D.D.S., Sec., N.D.A., U.S.A.

Mercury is one of the best elements in which to plunge the points of dental instruments to harden them. They should, of course, be first brought to a cherry-red.

MEETING OF DENTAL SOCIETIES.

JUNE.

New Hampshire, Concord, 3d Tuesday.
Colorado, Denver, 1st Tuesday.
Pennsylvania, Philadelphia, 1st Tuesday.
Indiana, Terre Haute, 26th.
Kentucky, Louisville, 1st Tuesday.

JULY.

California, San Francisco, 3d Tuesday.
Minnesota, St. Paul, 2d Wednesday.
Missouri, Pertle Springs, 4th.
Rhode Island, 1st Tuesday.
Wisconsin, Milwaukee, 3d Tuesday.
Connecticut Valley and Massachusetts, Boston, 10th.
South Carolina, Leesville, 3d Tuesday.
National, Washington, D. C., 24th.
Tennassee, Memphis, 1st Tuesday.

AUGUST.

American, Louisville, Ky., 4th Tuesday.
Georgia, Dalton, 1st Tuesday.
Missiesippi, Jackson, 4th.
Virginia, Charlottsville, 19th.

The Central Dental Association of Northern New Jersey is a live society. Every effort is put forth to make its meetings interesting and profitable. There are many sections that could imitate the dentists of central New Jersey.

Pennsylvania State Dental Society. — The Twentieth Annual Meeting of the Pennsylvania State Dental Society will be held in Philadelphia, Pa., Tuesday, June 5, 1888. The sessions to continue for three days. WM. B. MILLER, D.D.S., Recording Secretary.

First District Dental Society of New York.—At the annual meeting of this Society, held Tuesday evening, April 3, 1888, the following were elected officers for the ensuing year: *President*, W. W. Walker; *Vice-President*, J. F. P. Hodson; *Secretary*, B. C. Nash; *Treasurer*, John I. Hart; *Librarian*, J. Bond Littig. Also a Board of Censors for five years, consisting of A. L. Northrop, Frank Abbott, S. G. Perry, William Carr, and A. R. Starr.

Delegates to the State Dental Society for four years: J. W. Taylor and B. A. R. Ottolengin. B. C. NASH, Secretary.

Miscellaneous.

THE PHYLOSOPHY OF A COLD.

Dr. Frank Woodbury, a good authority on colds, Professor of Materia Medica at the Medico-Chirurgical College, of Philadelphia, recently lectured at the social meeting of the Alumni Association of the Philadelphia College of Pharmacy. His subject was "The Philosophy of a Common Cold," and the practical result of his remarks may be summed up thus: The way to cure a cold is to cure the patient, and the time to cure the patient is before he gets the cold. In other words, the proper way is to abolish the "catarrhal state," and the catarrhal state of the system is that in which it is favorable for the catching of a cold. There is a susceptibility by some to take cold, while there is resistance by others. Of a large audience leaving a heated hall and entering cold air outside, some take cold while others do not. The reason why all do not take cold is because they are not susceptible. Susceptibility to cold, he said, is probably due to impairment of nutrition. Physicians find that after a period of exhaustive work they are liable to an attack of cold; but if they be in good health they pass through the same conditions with impunity. A celebrated physician, he said, attributed this catarrhal state to indolence and luxury. "In the sweat of thy face shalt thou eat bread." There is no royal road, said the lecturer, to the plow-boy's appetite, and to have the plow-boy's appetite you must do the plow-boy's work.

The state of the skin is an important part of the catarrhal state. Some people sleep in the same underclothing that they have worn during working hours. The tendency of this is to convert the skin into something like a mucous membrane; it ceases to be a protective covering. With such people the clothes are a part of the body. Benjamin Franklin advocated the air bath. The speaker said that when people came to him suffering with a cold in the upper air passages and bronchial tubes his care is to harden the skin, and for this purpose he recommends the use of the flesh brush, exposure to the air, the cold douche, frequent change of underclothing and physical exercise.

Retrospection of Invention.—As to the inspiring motive of invention: It is sad to relate that nearly all inventions have been made with the object of gratifying some selfish emotion or propensity. Commerce and warfare have been the causes which have prompted nearly all great inventions.

"The greatest good to the greatest number," has been indeed the motto, but it has been often borne in mind that "the greatest number is number *one!*"

There is one curious fact as regards the origin of inventions:

"With all their power, wealth and numbers, we cannot trace one mechanical invention, nor one scientific discovery even of third or fourth rate importance to any person of the ancient Latin blood."

There be those who, forgetting the creative and recreative powers of invention, lament the loss of improvements which have disappeared.

Why should we deplore the loss of the art of hardening copper

when we have those more recent of producing from that metal in alloy with others bronzes which have every quality desired: toughness, hardness, high tensile strength, elastic limit, fine grain, good anti-friction qualities, high conductive powers for heat and electricity, resistance to corrosion, susceptibility to polish, and sharp casting properties?

Have we lost the secret of the fine Tyrian purple? We dip rainbow and sunset from the gas retort; and paint the Aurora Borealis with the colors of the oil well.

We hear of the lost arts—they are few. They were at one time new. Inventions produced them. Circumstances consigned them to oblivion as facts, then disappeared, leaving no trace. The world went on without them as before. Their place has been supplied by others, like them or better.

Although inventors are the true benefactors, we find but few statues erected to them, but their monuments are before us and about us at every turn. Of Gutenberg and Hoe, every newsboy reminds us; of Howe and Whitney, every seam and every yard of cotton cloth or cotton thread perpetuate the memory. The telegraph clicks out the name of Morse, the telephone buzzes that of Edison, and the noisy mower rattles out that of his father-in-law, Lewis Miller. Spindle and loom, engine and lathe, join in grand chorus to sound the praises of their respective inventors and perfectors.—*Cin. Artisan.*

The Reported Excuse or Explanation given by a young man arrested for swindling—that his father had discarded him and he had no other means of making a living, carries with it a lesson that has been told again and again in the admirable reports of our Eastern Penitentiary, but which is still unheeded, and that is that want of a trade or calling is one of the prominent inducing causes to crimes against property. Want of education is not so common among the younger convicts of to-day as want of knowledge how to work. And it is not the waif of society alone that suffer in this way, but the children of indulgent parents who are allowed to grow up in idleness until they reach a period when an accident, perhaps, suddenly throws them upon their own resources, and they find they have no means of making an honest living except in coarse ways that are distasteful to them. Few parents able to care for their children would excuse themselves if they should allow their boys to reach manhood without having them taught to read and write, but the obligation is no less imperative to have them taught how to work and become self-supporting. This neglected, the youth, when thrown upon his own resources, is under special temptation to resort to dishonest means of getting a livelihood.

Fruit is generally made the dessert of our meals, and it is thought injurious to eat it between meals. We are inclined to believe, if a dish of fruit were made the first course, it would not only be the more appetizing, but prepare the digestion for the heavier food of the meal. Fresh fruit a half hour, or an hour before the meal, is perhaps still better. Do we not eat too much meat, specially in summer?

THE BEGINNINGS OF SOME RICH MEN.

Instances of lowly beginnings are not rare in the list of Chicago millionaires, J. W. Doane, the President of the Merchants' Loan and Trust Company, began his commercial career in Chicago a very small dealer in peanuts. W. M. Hoyt, the wholesale grocer and founder of the immense tea trade between Chicago and China, in his youth kept a little apple-stand at the door of the old Richmond Hotel on Lake Street. L. J. Gage's first work was as a carpenter in his father's box-factory on the West Side. The Libby brothers, the immensely rich packers, started as working butchers. Jacob Rosenburg, the capitalist, and Levi Rosenfeld, who died last summer, whose great fortunes were largely increased by their share in the Michael Reese $11,000,000 estate, were both peddlers, and carried packs about the surrounding country. H. A. Kohn, the head of the big wholesale clothing house on Franklin Street, was also a peddler. N. K. Fairbank boasts that he can lay a brick now as well as in his youth, when he worked as a mason. C. H. M'Cormick and Leander J. M'Cormick were foundrymen. The first shop they owned was a small shed on North Water Street, east of Rush. B. P. Hutchinson earned his youthful wages as a shoemaker. Nelson Morris blacked boots and did chores around a small inn in the old Sherman Stock-yards. Afterward he began trading in lame hogs. C. B. Farwell's first employment in Chicago was as the smallest clerk in George Smith's bank on Lake Street.—*From the Chicago News.*

Dr. Geo. W. Melotte, of Ithaca, N. Y., has a great variety of mechanical apparatus. With a reversible, tilting melting cup, he can melt two pennyweights of twenty-carat gold in a minute. He has a blow-pipe adaptable to either nitrous oxide or illuminating gas, which has a spring key for delicate adjustment. It is supported by a standard with a universal joint. He has also a fine system of *die-making for crown-work.* The impression of a short root or the cusp of a tooth is taking in stick shellac or sealing wax slightly warmed, which is placed on a rubber cork, thus forcing back the gum. A rubber tube stretched over the cork and impression completes the mold for the die. Into this is poured a meatal fusible at one hundred and twelve degrees. Tin foil is burnished with the hands over the portion taken from the impression, to prevent adhesion, with the rubber tube again forming a mold, another pour is made, completing both dies with one melt of the metal.

In Favor of a Vegetable Diet.—All the heavy work of the world is not done by men who eat meat. The Roman soldiers, who built such wonderful roads, and carried a weight of armor and luggage that would crush the average farm hand, lived on coarse brown bread and sour wine. They were temperate in diet and regular in exercise. The Spanish peasant works every day and dances half the night, yet eats only his black bread, onion and watermelon. The Smyrna porter eats only a little fruit and some olives, yet he walks off with his load of a hundred pounds. The coolie, fed on rice, is more active, and can endure more than the negro fed on fat meat.